MODEL I / MODEL III

BUDGET
MANAGEMENT

CAT. NO.
26-1603

Radio Shack TRS-80 | SOFTWARE ™

Important Information for Cassette Users

Note: Model III BASIC on the TRS-80 Model III is essentially the same as Level II BASIC on the TRS-80 Model I. The only difference is that a higher baud rate for saving onto tape can be set if you have a Model III with Model III BASIC (high = 1500 and low = 500). Both low and high baud rate use the same volume setting on the Model III.

Using Your Cassette Deck

Many factors affect the performance of a cassette system. The most significant one is volume. Too low a volume may cause some of the information to be missed. Too high a volume may cause distortion and result in the transfer of background noise as valid information.

Five different cassette models have been supplied with the TRS-80 system— the CTR-40, CTR-41, CTR-80, CTR-80A, and CCR-81. Each model has its own loading characteristics. The table below gives the suggested volume ranges for each of the CTR models.

Notice that the volume ranges for Level I and Level II are different. This is because the Level II data transfer rate is faster (500 baud vs. 250 baud). Also, notice that for the TRS-80 Model I, pre-recorded Radio Shack programs need a slightly higher volume setting than that required by your own CSAVED tapes. This is because the pre-recorded tapes are produced with high-speed audio equipment at a slightly lower volume level than the CSAVE process provides. The Model III records at a lower volume than the pre-recorded tapes are recorded at, so that the volume setting for user-generated tapes is higher than for pre-programmed tapes. You will need to take this into account when CLOADing Level II programs into a Model III.

Recorder Model	User–Generated Tapes			Pre–Recorded Radio Shack Tapes		
	Model I		Model III	Model I		Model III
	Level I	Level II		Level I	Level II	
CTR-40	Yellow Line	Red Line		Yellow Line	Red Line	
CTR-41	6–8	4–6		6.5–8.5	5–7	
CTR-80	4.5–6.5	3–5	5–7	5.5–7.5	2.5–5	4–6
CTR-80A	4.5–6.5	3–5	5–7	5.5–7.5	2.5–5	4–6
CCR-81	4.5–6.5	3–5	5–7	5.5–7.5	2.5–5	4–6

(With the CTR-40, CTR-80, CTR-80A, and CCR-81, turn the control to the left to increase volume. With the CTR-41, turn the control to the right.)

When information is being loaded from the cassette tape, two asterisks will appear on the screen. The one on the right will flash on or off as the program is read in. If the asterisks do not appear, or the one on the right does not flash, then the volume setting is probably too low. Increase the volume and try again. If you have a Model III this may be an indication that the tape's baud rate is different than the Computer's baud rate. (All Radio Shack Model I Level II pre-recorded cassettes are recorded at 500 baud rate, so Low baud rate must be selected when they are loaded on the Model III.) Try resetting the baud rate from high to low or vice versa (See your Operation Manual).

Use the reset button to stop the cassette and return control to you if loading problems occur.

Radio Shack Programs are recorded at least twice on each tape. Following this practice when you record programs on tape will give you a back-up if one does not load properly or if it becomes damaged.

Important Note: The CTR-41 requires that you keep the supplied ''dummy plug'' in the MIC jack at all times. However, the other models should never be used with the ''dummy plug.''

Level I

Sometimes you will get an error message during an attempted CLOAD. This means that some information was lost or garbled. Adjust the volume level slightly and try again.

Level II and Model III BASIC

In case of an error message, proceed as above. There is also a rare case in which the program is not loaded correctly even though no error message is generated. So, after CLOADing a program, be sure to LIST it. If some data was garbled, then at some point in the listing the display will be filled with meaningless words and characters. Adjust the volume and try again.

Hints and Tips

Computer tapes should be stored in a relatively dust-free area (a cassette case is recommended) and protected from high temperatures. Magnetic and electrical fields may alter recorded information, so avoid placing the tape near them (i.e. household appliances, power sources such as transformers and television sets, etc.).

The cassette deck supplied with the TRS-80 is very compatible with the system and will perform its duties with great success. To keep the cassette deck in top condition and thus minimize your problems, you should periodically perform some routine maintenance on it. Dirty heads can cause as much as a 50% loss of volume. Also, heads become magnetized with use and may cause distortion. We recommend that you clean the head, capstan, and pinch roller after every four hours of operation. Heads on new recorders should always be cleaned before use.

Note: Cassette cleaning and demagnetizing accessories are available from your local Radio Shack store.

BUDGET MANAGEMENT

Radio Shack

Contents

What Do I Get? ...

The four programs in this package are on two cassette tapes. If you have a TRS-80 Disk System, you can easily convert them to a diskette. Instructions are included in this manual. (The conversion process will require the use of a cassette recorder.)

... And What Must I Already Have?

The basic equipment you'll need depends on the kind of system you have.

MODEL I:

LEVEL II BASIC (Tape)	DISK BASIC
16K RAM (minimum)	32K RAM (minimum)
Cassette Recorder	One Disk Drive (minimum)
Printer (optional)	Printer (optional)

MODEL III:

MODEL III BASIC (Tape)	DISK BASIC
16K Ram (minimum)	32K Ram (minimum)
Cassette Recorder	One Disk Drive (minimum)
Printer (optional)	Printer (optional)

The optional printer is needed only if you want to print reports. If you select to print your reports, you must either have a printer capable of printing 132 columns on 15 inch paper, or 132 columns compressed to print on 80 column paper. Otherwise, the reports will be displayed on your Video Screen.

Of course, you'll need blank cassettes or diskettes to store your budget information. Disk systems with one drive will need a TRSDOS diskette for this purpose. If you have more than one drive, you will need a blank formatted diskette.

But you don't need a lot of knowledge. That's what this manual is for.

But What Good Is It?

If you wonder where all your money is going . . . and who doesn't
. . . or if you're trying (unsuccessfully) to stick to a budget that's not
realistic . . . then you'll really appreciate the Radio Shack Budget
Management Package.

This package has four programs designed especially to help you set
up and monitor your own personal budget. Of course, you'll
still have to supply the will power to stick to that budget. But we
hope these programs will help you to supply that will power.

And best of all! You don't have to be a computer expert to use
Budget Management. You don't even need to know BASIC (the
language your Computer "speaks").

Budget Management isn't an Accounting Package, though, it's for
budgeting only. Accounting is more business-like and legal. For
example, under Budget Management, you set up house payments as
an expense account. In Accounting, paying the house payment
would reduce a liability for the principal portion of the payment.

So to put it in a nutshell, Budget Management will help you make
decisions on where to spend your money. It keeps lots of facts
organized for you so it's easy to see where you stand.

Is There Anything Else?

One more thing! A lot can happen to destroy cassettes or diskettes
and the information stored on them.

Since these programs store all your accounts on tape or diskette, you
ought to make it a routine to keep extra copies of important files —
not only here but in all your computer work. We'll make suggestions
when files are important enough to create backup copies.

OK, I'm Convinced . . . Now When Can I Use It?

You can begin right away.

INITialization is the first program that you will use. It creates your account structure, inserts new accounts, and renumbers your account numbers, but you won't use it very often after this. Later you'll need it only if you want to drastically reorganize your accounts.

What Do I Do First?

The first thing you do is load the INIT program into memory. Instructions for loading programs are the same no matter which of the four programs you will use. Responses that you must type are highlighted in black or gray.

To Load From Tape

1. Make sure your recorder is properly connected and turn on your computer.
2. Place the INIT cassette in your recorder and push the Play key.
3. For Model III Users Only: **CASS?** will appear on the screen. You press **L**.
4. The screen will show: **MEMORY SIZE**. Press **ENTER** .
5. The screen will show: **READY**.
6. Type **CLOAD** **ENTER** . The computer will read in the program automatically. You can be sure this is happening when two asterisks appear (one of them blinking) in the upper right of your Video Display.
7. When the program has been completely read in, the cassette will stop and the **READY** prompt will return. Type **RUN** **ENTER** and the program will begin.
8. Begin with "How Do I Create Accounts" on page 9.
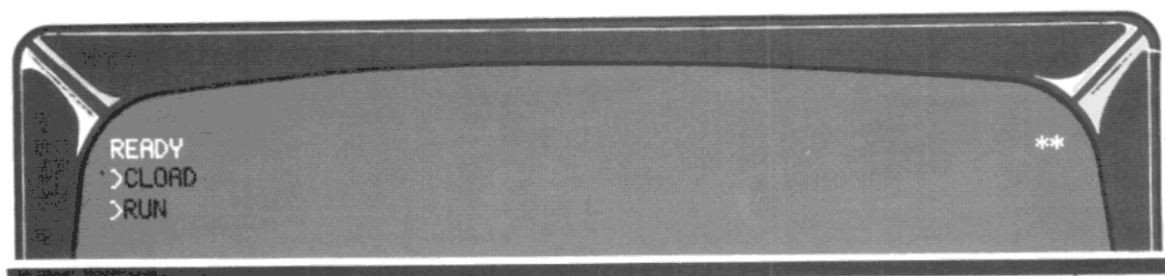
Converting to Disk

If you have DISK BASIC, there are a few more steps to go through, but they are all easy. By following all these instructions, you can save the programs on diskette and run them more easily later.

1. Make a backup copy of TRSDOS and DISK BASIC on a blank diskette using the TRSDOS utility BACKUP. (See the TRSDOS manual for detailed instructions.)
2. Using this diskette, load TRSDOS. Load DISK BASIC by typing **BASIC** [ENTER]. Press [ENTER] to answer the Files and Memory Size questions.*
3. Model I Users Only: Type **CMD "T"** [ENTER].
4. Model III Users Only: Type **POKE 16913,Ø** and press [ENTER]. (This will set your rate to 500 Baud.)
5. Place the INIT cassette in your recorder. (Make sure your recorder is properly connected, and the Play key is pushed.) Make sure your tape is rewound to the beginning.
6. Type **CLOAD** [ENTER]. The INIT program will automatically load into memory (and two asterisks will appear in the upper right corner of your Video Display.)
7. Model I Users Only: Type **CMD "R"** [ENTER].
8. Type
   5ØØØ IF E=99 PRINT "*END OF RUN": RUN "MENU"
   and press [ENTER].
9. To make sure you typed this correctly, type
   LIST 5ØØØ [ENTER].
10. If it's OK, type **SAVE "INIT"** [ENTER]. If you made a mistake, retype the entire line.
11. Use the TRANS tape and repeat steps 3-7.
12. Enter
    55ØØ IF E=99 PRINT "*END OF RUN": RUN "MENU"
    and press [ENTER].
13. Type **LIST 55ØØ** [ENTER] to check this.
14. If it's OK, type **SAVE "TRANS"** [ENTER].
15. Use the EDIT tape and repeat steps 3-7.
16. Enter
    55ØØ IF E=99 PRINT "*END OF RUN": RUN "MENU"
    and press [ENTER].
17. Type **LIST 55ØØ** [ENTER] to check this.
18. If it's OK, type **SAVE "EDIT"** [ENTER].
19. Use the REPORT tape and repeat steps 3-7
20. Enter
    5ØØØ IF E=99 PRINT "*END OF RUN": RUN "MENU"
    and press [ENTER].
21. Type **LIST 5ØØØ** [ENTER] to check this.
22. If it's OK, type **SAVE "REPORT"** [ENTER].

*48K SYSTEMS ONLY – SET MEMORY SIZE TO 65529

23. Enter the following lines exactly as they appear below:

```
NEW
1ØØ 'BUDGET MANAGEMENT —— MASTER MENU 1.Ø
11Ø '(C.) 1979 TANDY CORP.
12Ø CLS: PRINT TAB(15) "BUDGET MANAGEMENT —— MASTER MENU":PRINT
13Ø PRINT TAB(2Ø)"Ø.) STOP":PRINT TAB(2Ø)"1.) INIT PROGRAM
14Ø PRINT TAB(2Ø)"2.) TRANS PROGRAM":PRINT TAB(2Ø)"3.) EDIT PROGRAM
15Ø PRINT TAB(2Ø)"4.) REPORT PROGRAM":PRINT
16Ø PRINT TAB(1Ø) "SELECT PROGRAM";:INPUT J
17Ø ON J+1 GOTO 2ØØ, 3ØØ, 4ØØ, 5ØØ, 6ØØ:GOTO 12Ø
2ØØ PRINT "* END OF SESSION *":END
3ØØ RUN "INIT"
4ØØ RUN "TRANS"
5ØØ RUN "EDIT"
6ØØ RUN "REPORT"
```

24. Type LIST ENTER, and make sure that all lines
are exactly as they appear above. Pressing @ and
SHIFT will stop the scrolling on the screen. Press
ENTER to reactivate screen scrolling.

25. If they're OK, type SAVE "MENU" ENTER

To run the Budget Management Package, insert this Program
diskette. At TRSDOS READY, type BASIC and press ENTER.
Press ENTER for HOW MANY FILES? and press ENTER
again for MEMORY SIZE? (48K users type 65529 and press
ENTER . At READY⟩ type RUN "MENU" ENTER and the
following option list will be displayed.
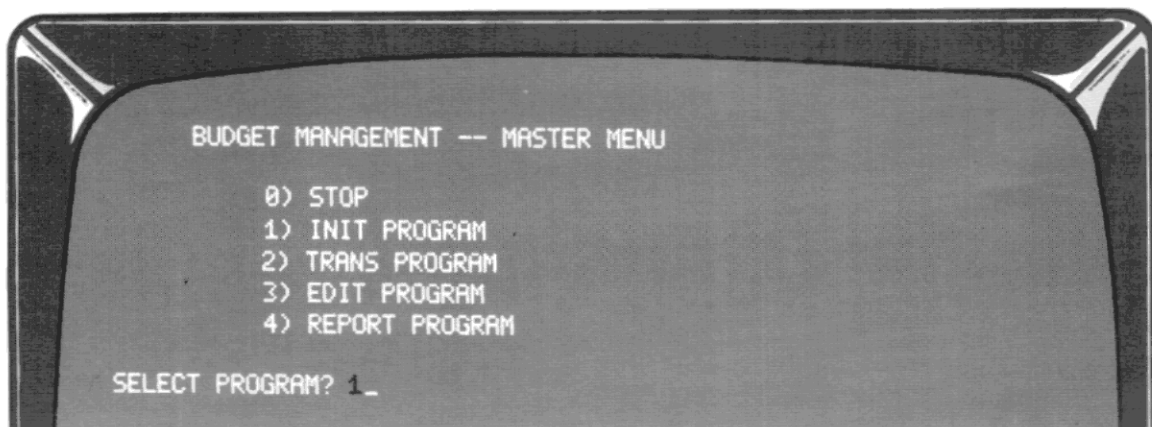
ENTER the number of the program you want and it will automatically
load and run. Whenever you finish with one of the four programs,
you will be returned to this option list to choose another one. If you
want to stop, select option Ø to go back to DISK BASIC.

For now, enter option 1 to run the INIT program.

How Do I Create Accounts?

If using Disk BASIC, you must have a diskette prepared for storing files. If you have a one drive system, you will need a TRSDOS disk for this purpose. If you are using more than one drive you will need a formatted diskette. (Use the TRSDOS Format Utility). Have the necessary diskette ready and available for storage before Creating Accounts.

As soon as you run the INIT program, the following is displayed.

```
BUDGET MANAGEMENT - INITIALIZATION 1.0

ENTER TODAY'S DATE (MM/DD/YY)? 09/05/78_
```

Before you can do anything else, you must type a valid date. MM=the month. It must be two digits between 1 and 12. DD=the day, also two digits between 1 and 31. YY=the year. Use the last two digits of the current year. The month, day, and year are each separated from one another by a slash, /.

When you type a valid date, the following will be displayed.


```
BUDGET MANAGEMENT - INITIALIZATION 1.0

        0) STOP
        1) CREATE ACCOUNTS
        2) INSERT ACCOUNTS
        3) RENUMBER ACCOUNTS
        4) SAVE DATA

ENTER YOUR CHOICE? _
```
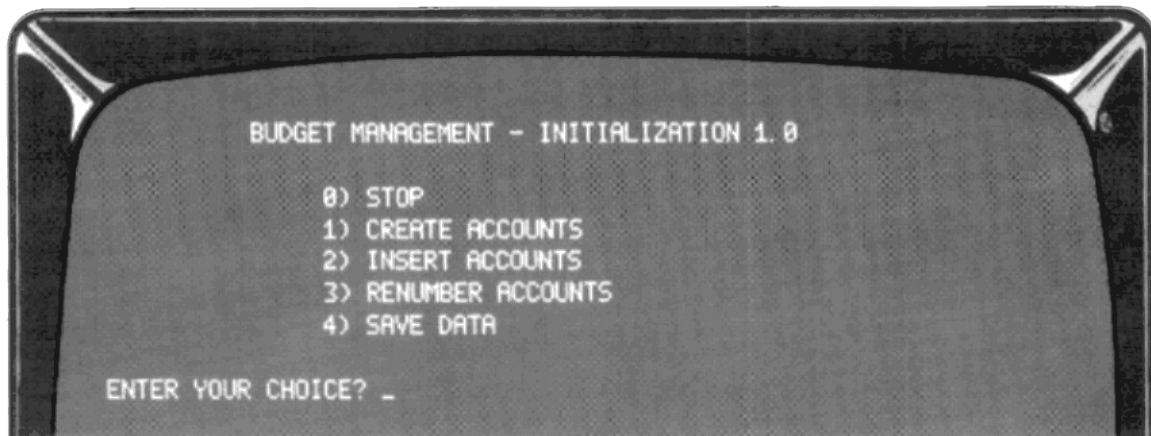
Now, you can create your accounts. The next two pages show a listing of the default accounts already programmed into INIT. You should take some time to look over these and, using them as a guide, decide which accounts you need and what accounts you want to add to these. You can use the worksheets in Appendix A to help with this.

An account is simply one of the possible categories where you can get or spend money. All of the accounts together should reflect all of the areas where you can spend or receive money.

For example, your Checking Account is an account. So is your Income, your Savings Account, your Mortgage or Rent, Utilities, etc.

```
                    BUDGET MANAGEMENT REPORT              PAGE  1
                    ** ACCOUNTS REPORT **
                       DATE: 10/ 1/78
```

ACCOUNT	NAME	CURRENT	BUDGET	PERCENT	REMAINING
100	CHECKBOOK BALANCE	0.00	0.00	0.00	0.00
200	SAVINGS ACCOUNT	0.00	0.00	0.00	0.00
300	PETTY CASH	0.00	0.00	0.00	0.00
400	TOTAL INCOME	0.00	0.00	0.00	0.00
410	REGULAR INCOME	0.00	0.00	0.00	0.00
420	WAGE/SALARY	0.00	0.00	0.00	0.00
430	BUSINESS INCOME	0.00	0.00	0.00	0.00
440	SOC.SEC. BENIFITS	0.00	0.00	0.00	0.00
450	PENSION	0.00	0.00	0.00	0.00
460	VARIABLE INCOME	0.00	0.00	0.00	0.00
470	BONUS	0.00	0.00	0.00	0.00
480	INTEREST	0.00	0.00	0.00	0.00
490	SAVINGS	0.00	0.00	0.00	0.00
500	BONDS	0.00	0.00	0.00	0.00
510	DIVIDENDS	0.00	0.00	0.00	0.00
520	OTHER INCOME	0.00	0.00	0.00	0.00
600	SET-ASIDE INCOME	0.00	0.00	0.00	0.00
610	FUTURE GOALS	0.00	0.00	0.00	0.00
620	EMERGENCIES	0.00	0.00	0.00	0.00
630	EDUCATION	0.00	0.00	0.00	0.00
640	RETIREMENT	0.00	0.00	0.00	0.00
650	VACATION	0.00	0.00	0.00	0.00
700	TOTAL EXPENSES	0.00	0.00	0.00	0.00
710	REGULAR EXPENSES	0.00	0.00	0.00	0.00
720	RENT/MORTGAGE	0.00	0.00	0.00	0.00
730	HOUSE MAINTENANCE	0.00	0.00	0.00	0.00
740	UTILITIES	0.00	0.00	0.00	0.00
750	ELECTRICITY	0.00	0.00	0.00	0.00
760	NATURAL GAS	0.00	0.00	0.00	0.00
770	WATER	0.00	0.00	0.00	0.00
780	TELEPHONE	0.00	0.00	0.00	0.00
790	INSTALLMENT PAYMENTS	0.00	0.00	0.00	0.00
800	INSURANCE	0.00	0.00	0.00	0.00

```
              BUDGET MANAGEMENT REPORT                    PAGE  2
              ** ACCOUNTS REPORT **
                   DATE: 10/ 1/78
```

ACCOUNT	NAME	CURRENT	BUDGET	PERCENT	REMAINING
810	FOOD & BEVERAGE	0.00	0.00	0.00	0.00
820	FURNISHINGS	0.00	0.00	0.00	0.00
830	CLOTHING	0.00	0.00	0.00	0.00
840	TRANSPORTATION..........	0.00	0.00	0.00	0.00
850	BUS	0.00	0.00	0.00	0.00
860	CAR	0.00	0.00	0.00	0.00
870	GAS	0.00	0.00	0.00	0.00
880	CAR MAINTENANCE	0.00	0.00	0.00	0.00
890	MEDICAL	0.00	0.00	0.00	0.00
900	RECREATION	0.00	0.00	0.00	0.00
910	MISCELLANEOUS	0.00	0.00	0.00	0.00
920	SEASONAL EXPENSES	0.00	0.00	0.00	0.00
930	EDUCATION	0.00	0.00	0.00	0.00
940	CONTRIBUTIONS	0.00	0.00	0.00	0.00
950	TAXES	0.00	0.00	0.00	0.00
960	CHRISTMAS	0.00	0.00	0.00	0.00
970	BIRTHDAYS	0.00	0.00	0.00	0.00
980	TRAVEL	0.00	0.00	0.00	0.00

Using the worksheets in Appendix A, write down the accounts you need. Use these default accounts as a guide.

Indent your accounts to show the main account/sub-account hierarchy you want.

INITIALIZATION

ACCOUNT NUMBER	LEVEL	ACCOUNT NAME	CURRENT	BUDGET
100	0	CHECKBOOK BALANCE	500	0
200	0	SAVINGS ACCOUNT	200	0
300	0	PETTY CASH	0	0
400	0	TOTAL INCOME		
410	1	REGULAR INCOME		
420	2	WAGE/SALARY	0	1200
600	0	SET-ASIDE INCOME		
610	1	FUTURE GOALS	0	50
620	1	EMERGENCIES	0	20
700	1	TOTAL EXPENSES		
710	1	REGULAR EXPENSES		
720	2	RENT/MORTGAGE	0	140
730	2	CAR PAYMENTS	0	105
740	2	UTILITIES	0	60
780	2	TELEPHONE	0	25
810	2	FOOD & BEVERAGE	0	150
830	2	CLOTHING	0	40

The above shows a worksheet that has been filled out.
Use the LEVEL column to show the indentation level of that account in the hierarchy.

There are two rules to keep in mind while filling this out. First, notice that in the default list some account names are indented under others. This indentation reflects a hierarchy between the accounts. A main or principal account can be divided into several sub-accounts.

```
84Ø TRANSPORTATION
85Ø     BUS
86Ø     CAR
87Ø         GAS
88Ø         MAINTENANCE
```

Above, **TRANSPORTATION** is divided into sub-accounts **BUS** and **CAR**. **CAR** is further divided into **GAS** and **MAINTENANCE**. In all cases, the main account total will equal the sum of the sub-accounts. So, enter totals only for the most indented level of sub-accounts under a given main account. In the example, you don't need to put a total for **84Ø** or **86Ø**, since both of these have sub-accounts.

CAR = GAS + MAINTENANCE
TRANSPORTATION = BUS + CAR

The Level can be from Ø to 5 and is a hierarchy level for that account. Zero is the Level for main accounts only. A sub-account can be indented only one Level more than the previous account. For example, **REGULAR INCOME** cannot be Level two or three. It must be one.

The **CURRENT** value is the balance of an account. It is the amount of money spent or earned in that category so far. If it is the beginning of the month, most **CURRENT** values will be zero.

The **BUDGET** value is the amount you expect to spend or earn in that category during an average month.

The **ACCOUNT NAME** can be no more than 18 characters. CAUTION: Do not use commas or colons in any field.

The **ACCOUNT NUMBER** follows from the default list.

NOTE: You only need to enter amounts for sub-accounts which have no sub-accounts of their own. In the example above, you don't need to enter an amount for **TOTAL EXPENSES** or **REGULAR EXPENSES** because both of these accounts have sub-accounts. Their amounts will be figured from the sum of their sub-accounts.

Now, the second rule you should keep in mind is that, whether you use the default list or not, the following five accounts must be present for the program to work properly.

CHECKBOOK BALANCE
SAVINGS ACCOUNT
PETTY CASH
TOTAL INCOME
TOTAL EXPENSES

The last two, **TOTAL INCOME** and **TOTAL EXPENSES** must have at least one sub-account to be of any use. If you use the default list (or a part of it) a sixth account **SET ASIDE INCOME** will also be used. It must also have sub-accounts.

CHECKBOOK BALANCE is, of course, your checking account. Its balance is the dollar value of the checks you can write.

The **SAVINGS ACCOUNT** is for your savings. Savings transactions affect the balance of this account.

The **PETTY CASH** account represents your cash on hand or pocket money. When you spend your pocket money, the balance of the **PETTY CASH** account is reduced.

Once you have decided on the accounts you need, there are two possible ways to feed your accounts to the Computer. You can use the default list if you have only a few accounts to add to it. Or create your own account structure and modify the program to accept it instead of the default list. (See Appendix B if you want to change the program.)
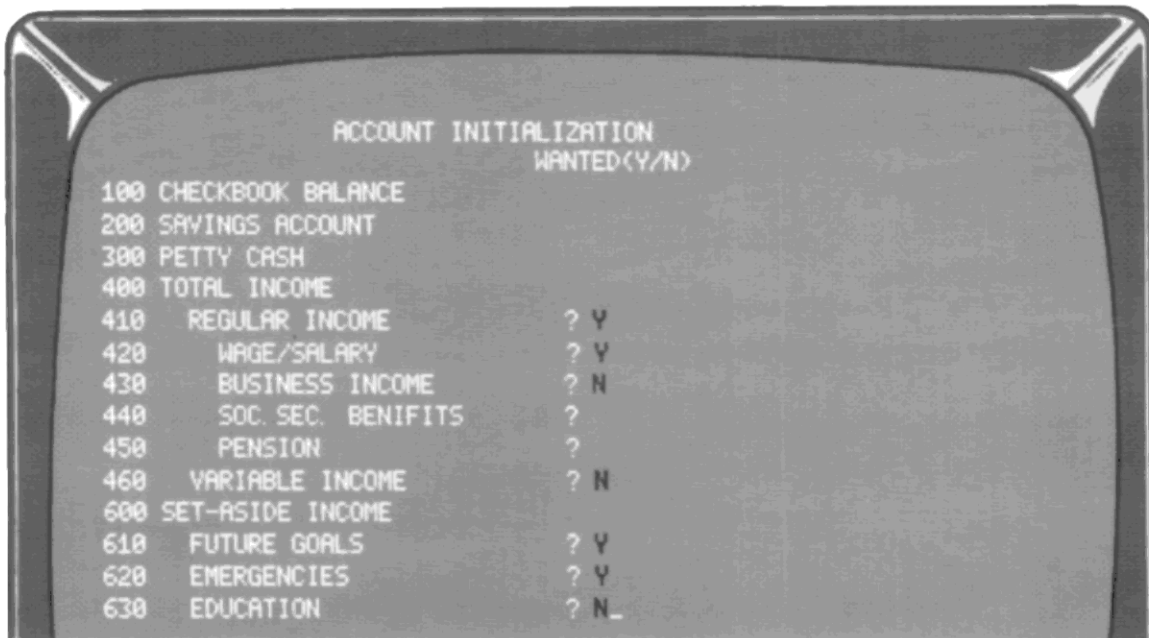
Using the Default List

If you only have a few accounts to add, use the default list. You can insert your additions later. You can leave out as many of the accounts on the default list as you wish by following the instructions below.

Type 1 **ENTER** to choose the **CREATE ACCOUNTS** option. The default list will be displayed, and you should press **Y** if you want to use that account or **N** if not. (You won't be asked about the six main, level $\emptyset$, accounts, they are not optional.)

If you answer **N** to an account, all of its sub-accounts will be skipped. So, if you want to use a sub-account, be sure to answer **Y** to its principal account.

If you press a key other than **Y** or **N** an error message will appear, and you will be allowed to try again. If you press ⬛ENTER⬛ without typing any other key, the program will assume the last answer you typed is also true for this account.

```
              ACCOUNT INITIALIZATION
                         WANTED(Y/N)
100 CHECKBOOK BALANCE
200 SAVINGS ACCOUNT
300 PETTY CASH
400 TOTAL INCOME
410   REGULAR INCOME          ? Y
420     WAGE/SALARY           ? Y
430     BUSINESS INCOME       ? N
440     SOC. SEC.  BENIFITS   ?
450     PENSION               ?
460   VARIABLE INCOME         ? N
600 SET-ASIDE INCOME
610   FUTURE GOALS            ? Y
620   EMERGENCIES             ? Y
630   EDUCATION               ? N_
```
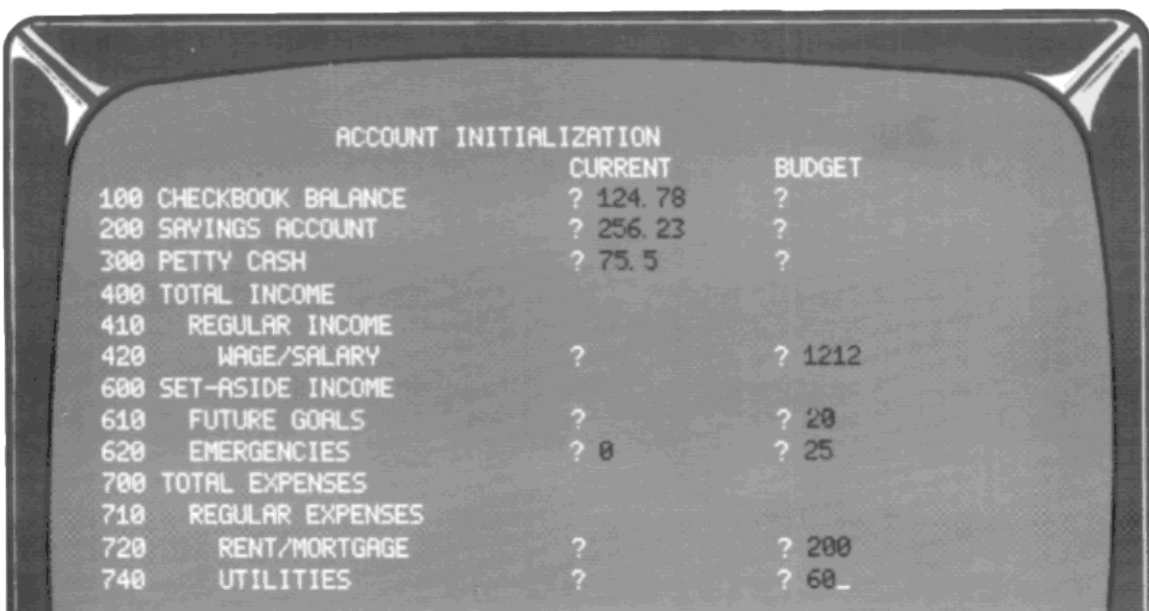
Notice that you must use accounts 1ØØ, 2ØØ, 3ØØ, 4ØØ, 6ØØ, and 7ØØ. By answering **N** to **VARIABLE INCOME**, all of its sub-accounts are skipped. Pressing only ⬛ENTER⬛ to 44Ø and 45Ø caused an answer of **N** to be assumed. Typing **R** ⬛ENTER⬛ to an account creates an error message and gives you the chance to try again.

```
              ACCOUNT INITIALIZATION
                         CURRENT       BUDGET
100 CHECKBOOK BALANCE    ? 124. 78     ?
200 SAVINGS ACCOUNT      ? 256. 23     ?
300 PETTY CASH           ? 75.5        ?
400 TOTAL INCOME
410   REGULAR INCOME
420     WAGE/SALARY       ?            ? 1212
600 SET-ASIDE INCOME
610   FUTURE GOALS        ?            ? 20
620   EMERGENCIES         ? 0          ? 25
700 TOTAL EXPENSES
710   REGULAR EXPENSES
720     RENT/MORTGAGE     ?            ? 200
740     UTILITIES         ?            ? 60_
```

After the account structure is set up, the INIT program starts over with the first account and allows you to enter the **CURRENT** and **BUDGET** amounts for the accounts you chose previously.

Pressing only **ENTER** causes the Computer to assume a value of zero. You will be returned to the option list automatically when finished.
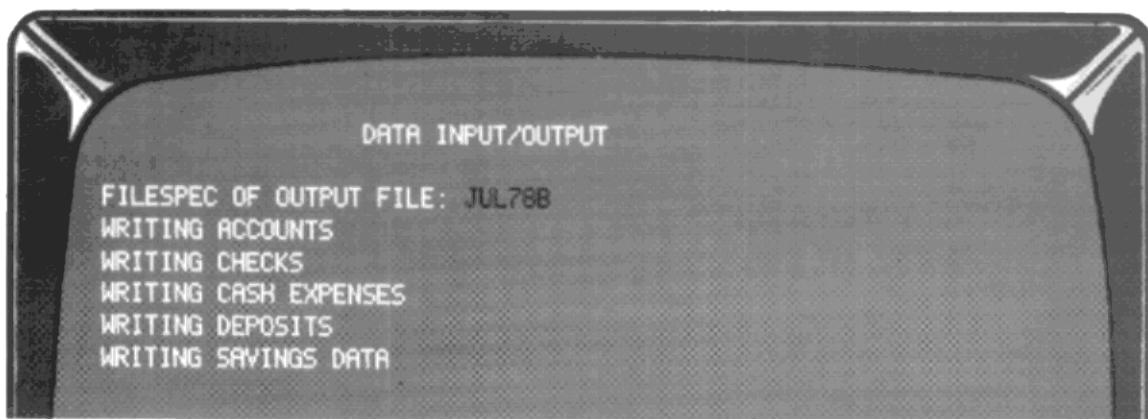
If you have no accounts to add and your account structure is exactly the way you want it to be, then save the data by following the instructions below. Otherwise, you should insert the accounts you want before saving them. See page 17 for instructions on this.

Saving Your Accounts

Once your accounts are completed, you must save them using option 4. All of the programs (except REPORT) must be saved since your accounts are stored in the Computer's temporary memory. If you turn your machine off, they will be lost. When you record them on cassette or diskette, you can play them back later.

If you have DISK BASIC, you will be asked for a TRSDOS filespec. Insert a TRSDOS diskette (or FORMAT a blank diskette for data if you have more than one drive). Type in a valid file name for your accounts and press **ENTER** . Do not use a period as part of the filespec unless you want to create a protected file. See below.

Each time you save files, keep an accurate record of the Filespec for use to load data later.

```
                  DATA INPUT/OUTPUT

      FILESPEC OF OUTPUT FILE: JUL78B
      WRITING ACCOUNTS
      WRITING CHECKS
      WRITING CASH EXPENSES
      WRITING DEPOSITS
      WRITING SAVINGS DATA
```

If you have only one drive replace the Program diskette with the System diskette that you will save data on. When the data is saved, put the Program diskette back in. If you have 2 drives leave the Program diskette in Drive Ø and use a Data diskette in Drive 1. Specify a Drive Spec as part of the filespec. (Example: JUL 78B:1)
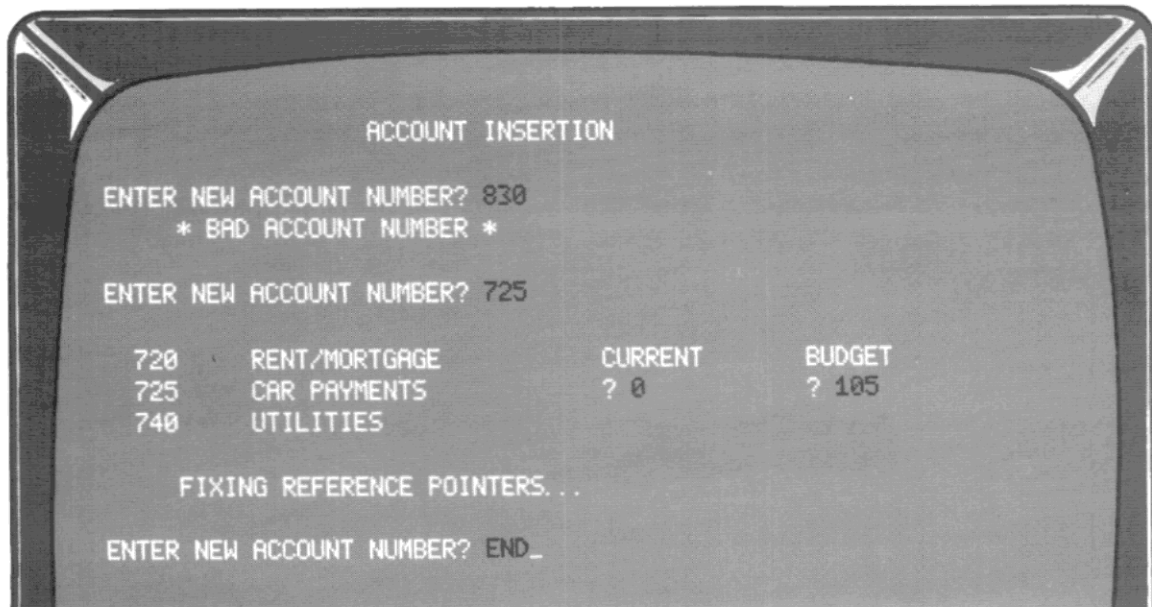
When using tape, the following will be displayed.

```
LOAD DATA TAPE(RECORD), THEN PRESS ENTER?_
```

Insert a blank cassette tape to save your data on and ready your recorder. Make sure the Record and Play keys are depressed. Press **ENTER** . (If you are using a tape with a leader, make sure you "Fast Forward" past the leader.)

When the accounts have been saved, the option list will reappear. You should save a second, backup copy.

Adding Accounts to the Default List

Below is an example of inserting the account **725 CAR PAYMENTS** at an indentation level of 2. Type ➜ to indent each level. **CAR PAYMENTS** was assigned account number **725** on the worksheet which puts it between **720** and **740**.

```
              ACCOUNT INSERTION

ENTER NEW ACCOUNT NUMBER? 830
     * BAD ACCOUNT NUMBER *

ENTER NEW ACCOUNT NUMBER? 725

    720     RENT/MORTGAGE        CURRENT      BUDGET
    725     CAR PAYMENTS         ? 0          ? 105
    740     UTILITIES

       FIXING REFERENCE POINTERS...

ENTER NEW ACCOUNT NUMBER? END_
```

The account above and below the insertion point appears. Then, the new **ACCOUNT NUMBER** is printed between them. You can type the new required information, **ACCOUNT NAME** and **BALANCES**.

If the **ACCOUNT NUMBER** already exists or is invalid, a * **BAD ACCOUNT NUMBER** * message is displayed. If you already have the maximum of 6Ø accounts, a * **NO ROOM TO INSERT** * message occurs.

The cursor will sit at an indentation level of 1 and wait for you to enter your **ACCOUNT NAME**. Type a right arrow → to indent to the next level. If you make a mistake indenting, type a shift back-arrow **SHIFT** ← to start over again at level 1. To add a zero-level account, you must create your own account list. See Appendix B.

Type your **ACCOUNT NAME** after indenting as desired. The **ACCOUNT NAME** can be no greater than 18 characters. Press **ENTER**

If you have indented more than 5 levels, or have indented more than one level inward from the account above your insertion point, a * **BAD LEVEL** * message is typed.

Press **ENTER** without typing anything to cancel the insertion in case the wrong **ACCOUNT NUMBER** was typed.

Type **END ENTER** instead of an **ACCOUNT NUMBER** to return to the option list.

After you enter the **ACCOUNT NAME**, you will be asked the **CURRENT** and **BUDGET** values. Press **ENTER** for a zero value.

NOTE: The **INSERT** option cannot change the main account/sub-account structure already in existence. In the example below, the insertion of **325Ø CAR2** will not change the existing structure.
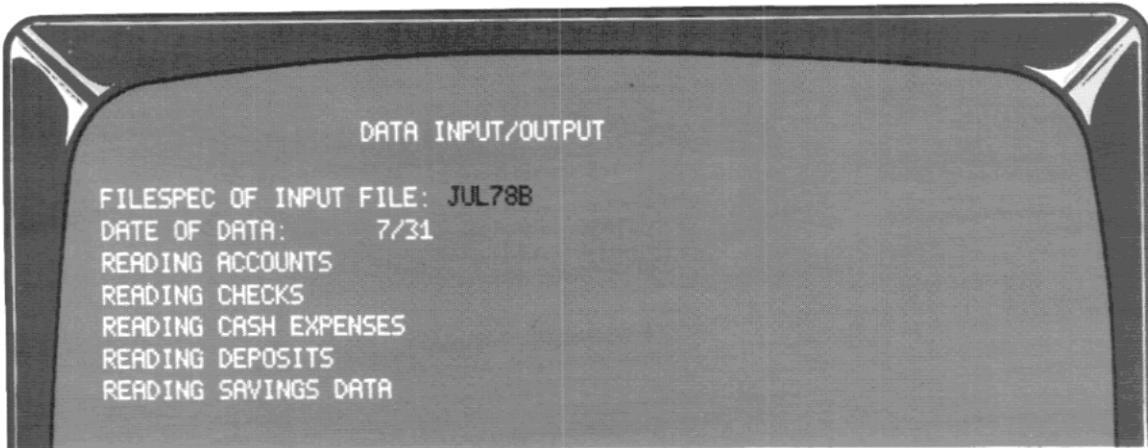
```
3ØØØ TRANSPORTATION
31ØØ    BUS
32ØØ    CAR
33ØØ        GAS
34ØØ        MAINTENANCE
```

The structure will still have **32ØØ CAR** as the main account to sub-accounts **33ØØ** and **34ØØ**, even though they are separated by the **325Ø** account as shown below.

```
3ØØØ TRANSPORTATION
31ØØ    BUS
32ØØ    CAR
325Ø    CAR2
33ØØ        GAS
34ØØ         MAINTENANCE
```

You can insert accounts later if you wish. However, this will affect the way you run cumulative reports. See notes on running these cumulative reports page 47.

To insert accounts later, run the INIT program and request option 2. You will be asked to load your most recent accounts from cassette or diskette. If you have DISK BASIC, the following will be displayed.

```
                      DATA INPUT/OUTPUT

     FILESPEC OF INPUT FILE: JUL78B
     DATE OF DATA:       7/31
     READING ACCOUNTS
     READING CHECKS
     READING CASH EXPENSES
     READING DEPOSITS
     READING SAVINGS DATA
```

When using tape, you will be prompted with

```
    LOAD DATA TAPE(PLAY), THEN PRESS ENTER?_
```

As soon as you have inserted the proper diskette or cassette and typed the requested information, press **ENTER** and the data will load into memory. Once there, you can insert new accounts as illustrated above.

NOTE: Using option 4, save your new account data once you have added what you want.

Should I Renumber My Accounts?

Renumbering accounts is a very severe action and should only be done when room is needed to insert new accounts. Also, you can renumber when you first create accounts and before you save them to put them in neat numerical sequence.

If you renumber accounts in the middle of the year, you cannot create cumulative reports (account numbers must be the same to do this).

So, don't renumber your accounts if they are acceptable as they are.

If you do decide to renumber accounts, use option 3. You will be asked to load your accounts from cassette or diskette if they are not already in memory. Then, you will be asked to enter a **START VALUE** and an **INCREMENT**.

ACCOUNT RENUMBERING

ENTER START VALUE? **100**
ENTER INCREMENT? **100**
RENUMBERING. . .

You should keep a record of the new account numbers on your worksheet next to the old numbers. From this time on, refer to the new numbers.
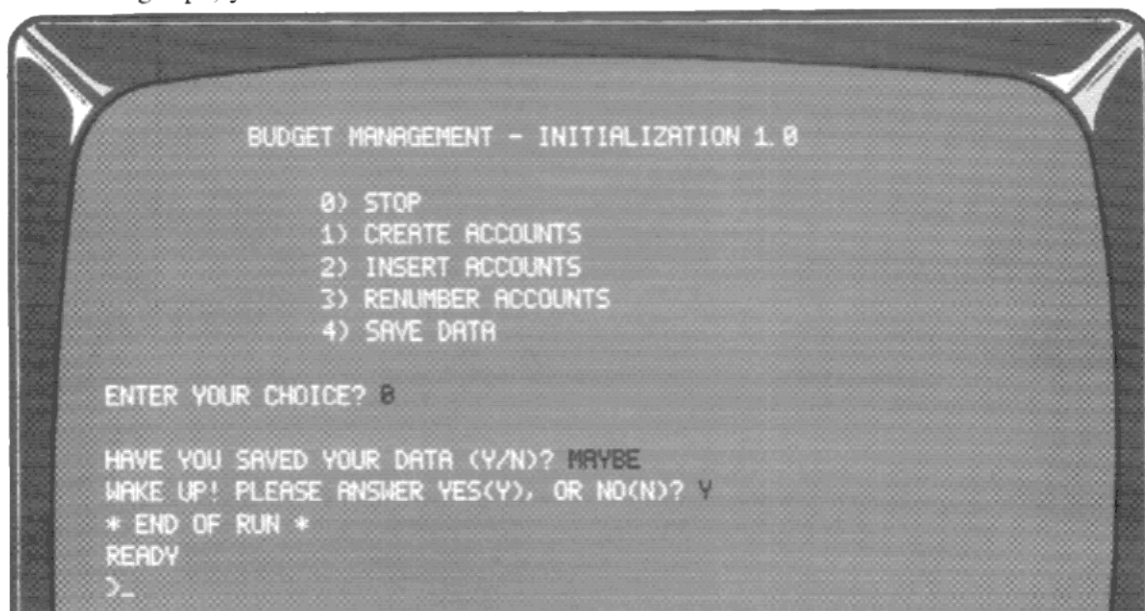
NOTE: Use option 4 to save your accounts with their new numbers.

Is That All?

Once you have created your account structure as you want it — including insertion and renumbering — and you have saved this data, you can select the ∅ option to stop this program. This option will ask you if you have saved your data as a reminder. If not, press **N**, and you will be able to save it now. If you have already saved it, press **Y**, and the ***END OF RUN*** will be displayed.

Under DISK BASIC, you will be returned to the MENU program so you can run another program if you want.

When using tape, you will be returned to BASIC.

BUDGET MANAGEMENT - INITIALIZATION 1.0

0) STOP
1) CREATE ACCOUNTS
2) INSERT ACCOUNTS
3) RENUMBER ACCOUNTS
4) SAVE DATA

ENTER YOUR CHOICE? 0

HAVE YOU SAVED YOUR DATA (Y/N)? MAYBE
WAKE UP! PLEASE ANSWER YES(Y), OR NO(N)? Y
* END OF RUN *
READY
>_

When Should I Use TRANS?

The TRANS program is the heart of the Budget Management Package. It allows you to enter and cancel checks, enter deposits and enter savings withdrawals or deposits. Also, it will clear your old transactions so you can start a new month of data. This last feature will be described later.

You should set up a timetable for using this program regularly. A few suggested schedules follow.

You can use the TRANS program as soon as you create your accounts. Then, you can run it once each week and again on the last day of the month. On this schedule, you will save one copy of your accounts after each run of TRANS. You can label or name these WEEK1, WEEK2, WEEK3, etc. They will be temporary files.

On the last day of the month, your accounts will reflect the entire month, and you should label them JAN79, FEB79, etc., depending on the month. You should save an extra copy of this file for backup purposes since you will be keeping it for some time.

Then, during the next month, you can re-use your temporary files from WEEK1, etc. as the temporary files of this month. You will have at least six sides of tapes in use after the first month. At the end of each succeeding month, you will have two more tapes. In DISK BASIC, use a diskette for these files and name them as illustrated above.

NOTE: If you record more than one data file on each side of a cassette, be sure to keep track of where each file begins using the counter on your cassette recorder.

An alternative schedule is to use the TRANS program only two times each month. You can label your accounts JAN79M for the mid-month temporary file and JAN79E for the end of month file that you save.

You could also run the program every other week or run it to coincide with your payday. But, whatever you decide for your schedule, you should include running the TRANS program at the end of each month and saving this copy permanently. And don't forget to keep backups.
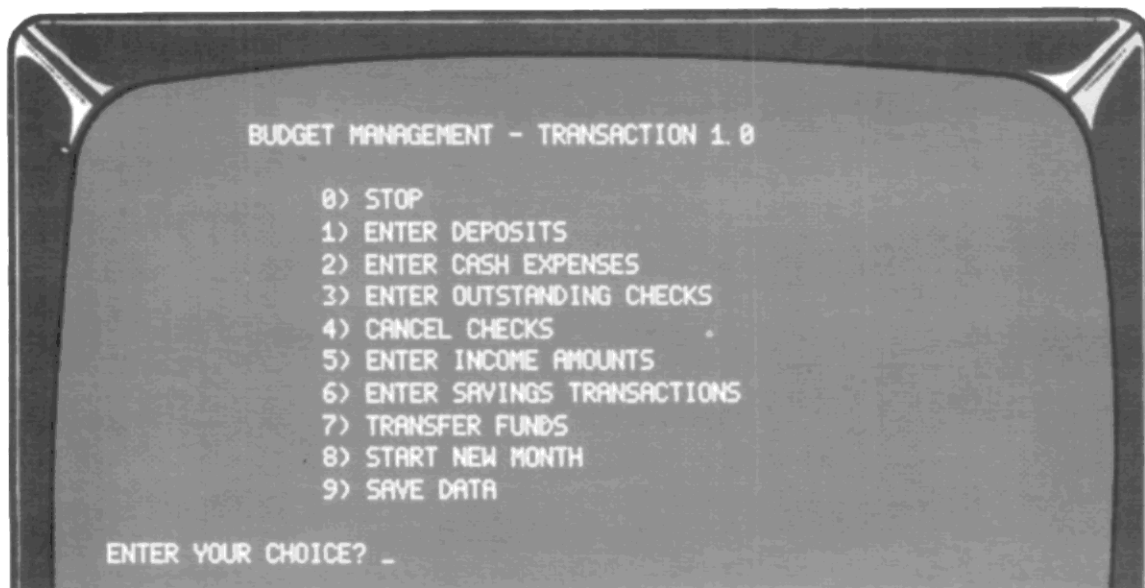
How Does TRANS Work?

First, load the program and run it according to the Loading Instructions. The following will be displayed.
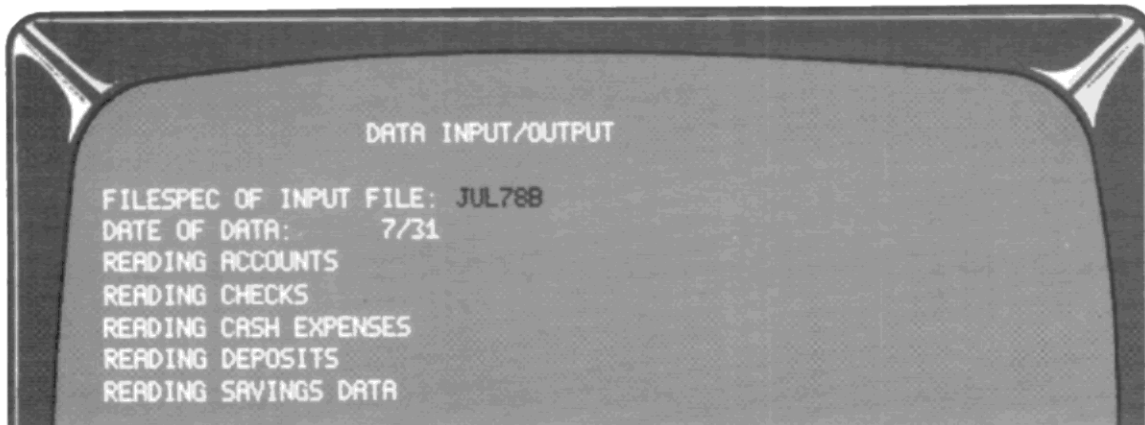
BUDGET MANAGEMENT - TRANSACTION 1.0

ENTER TODAY'S DATE (MM/DD/YY)? 07/31/78_

Type in the date. The option list will then be displayed.

```
       BUDGET MANAGEMENT - TRANSACTION 1.0

          0) STOP
          1) ENTER DEPOSITS
          2) ENTER CASH EXPENSES
          3) ENTER OUTSTANDING CHECKS
          4) CANCEL CHECKS            .
          5) ENTER INCOME AMOUNTS
          6) ENTER SAVINGS TRANSACTIONS
          7) TRANSFER FUNDS
          8) START NEW MONTH
          9) SAVE DATA

   ENTER YOUR CHOICE? _
```

The first time you enter a choice 1-9 after you run the program, you have to load your account data into memory. Use the tape or disk with the most recent changes — the one you saved last.

Under DISK BASIC, the following will be displayed.

```
                DATA INPUT/OUTPUT

   FILESPEC OF INPUT FILE: JUL788
   DATE OF DATA:       7/31
   READING ACCOUNTS
   READING CHECKS
   READING CASH EXPENSES
   READING DEPOSITS
   READING SAVINGS DATA
```

You should insert your most recent account diskette and enter the name of the most current account file.

When using tape, insert your most recent cassette and press **ENTER** . Be sure that your recorder is set ready to play.

```
LOAD DATA TAPE(PLAY), THEN PRESS ENTER?_
```

When the data has been loaded, the option you chose will begin to execute. All the options except 8 are described below. Option 8 is described later on page 37.

To Deposit To Checkbook

Option 1 allows you to deposit money in your checking account.
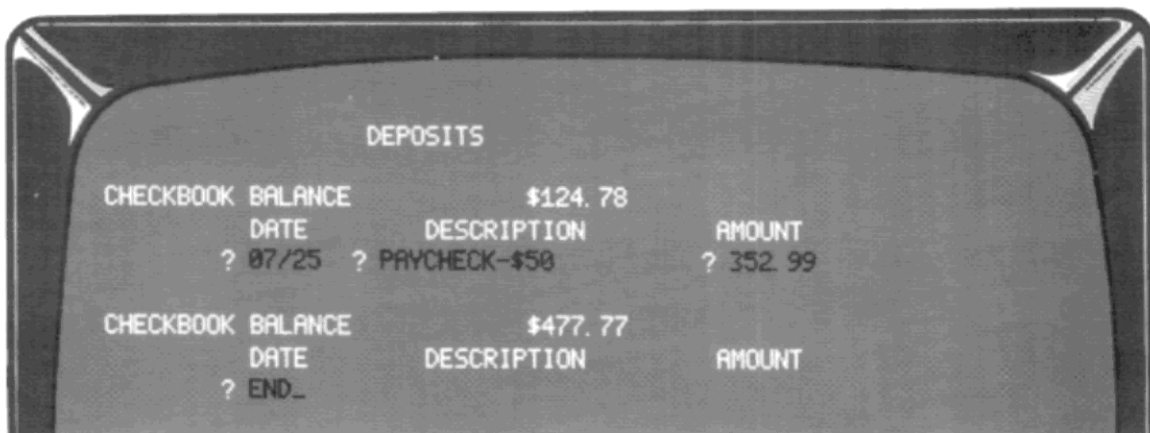
The current **CHECKBOOK BALANCE** is displayed before each deposit. You then enter the **DATE**, **DESCRIPTION**, and **AMOUNT** of your deposit. The new balance will be displayed and you will be allowed to enter deposits until you type **END** **ENTER** for the date.

If you press **ENTER** without typing a date, the Computer will assume that you want the **CURRENT DATE** you entered when the program first started.

The **DATE** you enter should be **MM/DD** format. Do not use the year for this entry. Month and day must each be two digits.

The **DESCRIPTION** should be no greater than 18 characters.

Outstanding Checks

Option 3 will allow you to record checks as you write them.

```
                   OUTSTANDING CHECKS

CHECKBOOK BALANCE              $477.77
    NO.      DATE         DESCRIPTION        AMOUNT      EXP. ACCT
  ? 101    ? 07/13  ? RENT                  ? 140        ? 1200


CHECKBOOK BALANCE              $337.77
    NO.      DATE         DESCRIPTION        AMOUNT      EXP. ACCT
  ? 101    ? 07/20  ? ELECTRICITY           ? 25.01      ? 1400
         * CHECK EXISTS *


CHECKBOOK BALANCE              $337.77
    NO.      DATE         DESCRIPTION        AMOUNT      EXP. ACCT
  ? 102    ? 07/20  ? ELECTRICITY           ? 25.01      ? 1400_
```

The current **CHECKBOOK BALANCE** is displayed before the entry of each check. The date is **MM/DD** format, and, again, if you press **ENTER** without typing a date, the Computer will use the date you typed at the beginning of the program.

If the **CHECK NUMBER** you recorded already exists, an error message *** CHECK EXISTS *** will be displayed.

DESCRIPTIONS should be no greater than 18 characters.

The **EXP. ACCT** is the account number of where you spent the money. The check amount will be added to the expense account you designate, and all main accounts will be corrected. For example, if you paid your rent by check and the rent account number is **55Ø**, use **55Ø** as the **EXP. ACCT**. (You only need to enter the sub-account that you charge the check to. Main accounts will be figured automatically.)

You may also charge checks to your **SAVINGS ACCOUNT** number if you write a check to deposit into your savings, or use your **PETTY CASH** account number if you write a check to cash.

To void a check, use a **DESCRIPTION** of **VOID** and an **AMOUNT** of zero. You can use any sub-account you wish as the **EXP. ACCT**.

To reflect a service charge or any special charge, use a **CHECK NUMBER** below 1∅∅ and use a **MISCELLANEOUS ACCOUNT** number for the **EXP. ACCT**.

Type **END** ENTER for the check number when you are finished, and you will be returned to the option list.

Cash Account

This account is used to record items you pay cash for and to keep track of your cash — your pocket money. Option 2 will allow you to enter a deposit or expenses on this account.

```
                      CASH EXPENSES

          PETTY CASH              $75.50
    ENTER 'PETTY CASH' DEPOSIT (0 IF NONE)? 50

          PETTY CASH             $125.50
             DATE        DESCRIPTION        AMOUNT     EXP. ACCT
          ? 07/01     ? LUNCH              ? 3.50      ? 1600

          PETTY CASH             $122.00
             DATE        DESCRIPTION        AMOUNT     EXP. ACCT
          ? 07/17     ? SNACK              ? .76       ? 1600

          PETTY CASH             $121.24
             DATE        DESCRIPTION        AMOUNT     EXP. ACCT
          ? END_
```

Any other time you get cash — for example, you deposit part of your paycheck and get cash for the rest — you should make a deposit to this account. If you have no deposit, type ∅ ENTER.

Then, you will be asked to enter expenses. You should give the **DATE** in MM/DD format. If you press ENTER only, the **CURRENT DATE** you used before will be used.

The **DESCRIPTION** should be no greater than 18 characters.

The **EXP. ACCT** must be a valid account number, and it can have no sub-accounts. The amount of the cash expense will be added to this
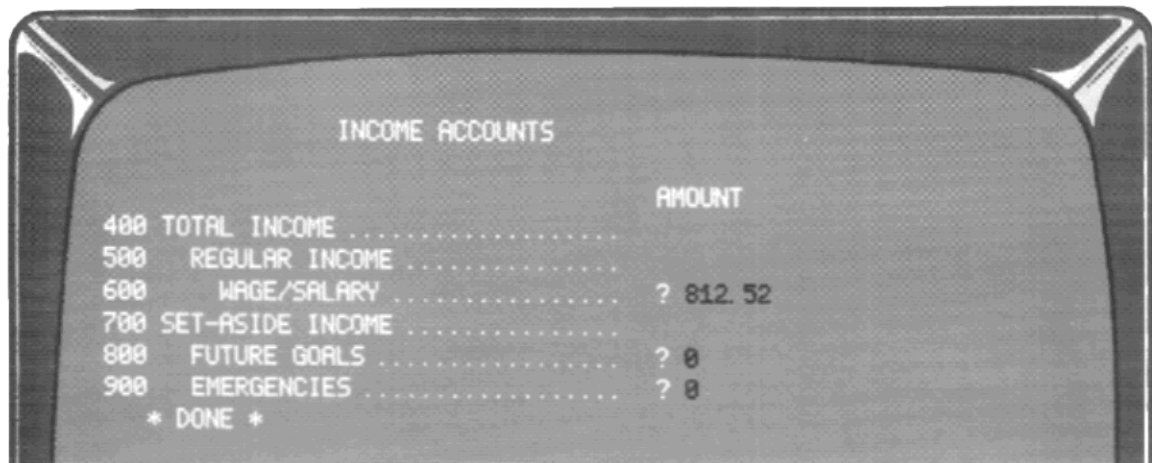
account automatically, and all main accounts will be adjusted automatically.

Type **END** **ENTER** for the **DATE** to return to the option list.

NOTE: If you wrote a check for cash, you can add it to your **PETTY CASH** account automatically by using the **PETTY CASH** account number for the **EXP. ACCT.** when you use option 3 to enter the check. Then, you don't have to use option 2.

Income Accounts

Select option 5 to have all your income accounts displayed one at a time. You can enter an amount to add to each one. If you have nothing to add press Ø. Type **END** **ENTER** to return.

```
              INCOME ACCOUNTS


                                        AMOUNT

400  TOTAL INCOME ....................
500     REGULAR INCOME ...............
600        WAGE/SALARY ...............  ? 812.52
700  SET-ASIDE INCOME ................
800     FUTURE GOALS .................  ? 0
900     EMERGENCIES ..................  ? 0
        * DONE *
```

NOTE: Entering an income amount will not add the amount to your checking or savings account. If you deposit this income into one of these accounts, you must choose another option to deposit it.

Savings Accounts

The current **SAVINGS ACCOUNT** balance will be displayed before each savings transaction in option 6. Enter a negative amount by typing a minus sign, −, before the amount for withdrawals. Use positive amounts for deposits.

Press **ENTER** only to use the **CURRENT DATE** you entered previously.

The **DESCRIPTION** should be no greater than 18 characters.

Type **END** for the date to return to the option list.

```
                    SAVINGS TRANSACTIONS

SAVINGS ACCOUNT              $256.23
          DATE            DESCRIPTION           AMOUNT
       ? 07/13  ? CAR DOWNPAYMENT            ? -200

SAVINGS ACCOUNT              $56.23
          DATE            DESCRIPTION           AMOUNT
       ? 07/30  ? PAYCHECK                   ? 480

SAVINGS ACCOUNT              $536.23
          DATE            DESCRIPTION           AMOUNT
       ? END_
```

NOTE: If you wrote a check to deposit into savings, you can add it
to your savings account automatically by using the **SAVINGS
ACCOUNT** number for the **EXP. ACCT.** when you use option 3 to
enter the check. Then, you don't have to use option 6.

To Transfer Funds

Option 7 allows you to transfer money from any account to any
other account (main account or sub-account).

After you enter the **ACCOUNT NUMBER** to which the money will
be added that account's name and balance will be displayed.

Then, you can enter the **ACCOUNT NUMBER** from which the
money will be taken. Its name and current balance will be displayed.

Finally, enter the **AMOUNT** to be transferred, and the action will
take place. All main accounts will be corrected automatically to
reflect any changes necessary.

Type **END** **ENTER** to return to the option list.

```
                         TRANSFER FUNDS

     TO ACCOUNT NUMBER? 800    FUTURE GOALS           $0.00
   FROM ACCOUNT NUMBER? 300    PETTY CASH           $121.24
                 AMOUNT? 20


     TO ACCOUNT NUMBER? 900    EMERGENCIES            $0.00
   FROM ACCOUNT NUMBER? 0
                 AMOUNT? 25


     TO ACCOUNT NUMBER? 900    EMERGENCIES           $25.00
   FROM ACCOUNT NUMBER? 0
                 AMOUNT? 0


     TO ACCOUNT NUMBER? END_
```

NOTE: This option can be used to correct some errors. In the above example, when the **FROM ACCOUNT NUMBER** is zero, the **AMOUNT** is added to the **TO ACCOUNT NUMBER**. You should be careful using this option for changes like this.
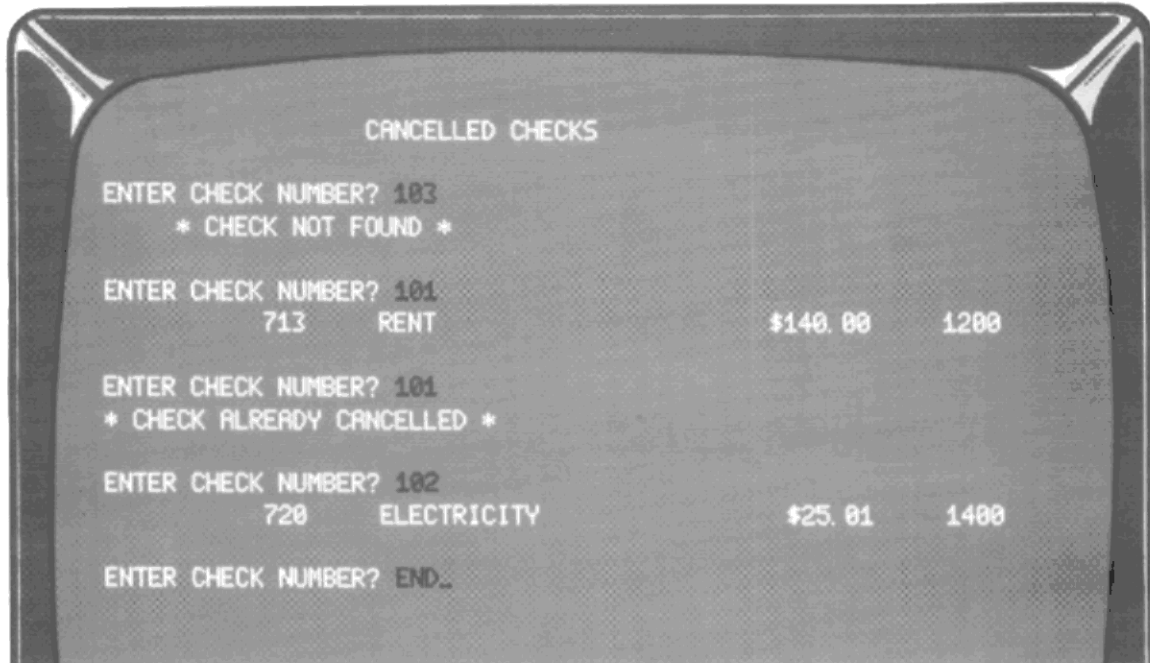

To Cancel Checks

Option 4 will probably be used whenever you get your monthly statement from the bank.

Simply type the **CHECK NUMBER** of the check you want to cancel. That check will be displayed on the next line.

If the check does not exist, the * **CHECK NOT FOUND** * message is displayed. If the check is already cancelled, the * **CHECK ALREADY CANCELLED** * message is displayed.
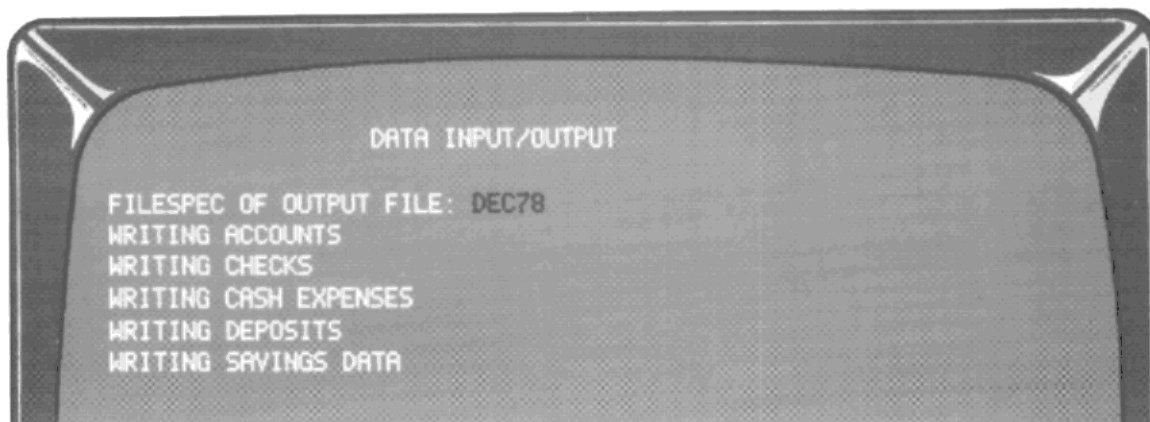
Type **END** **ENTER** to return to the option list.

```
                    CANCELLED CHECKS

ENTER CHECK NUMBER? 103
     * CHECK NOT FOUND *

ENTER CHECK NUMBER? 101
          713      RENT                    $140.00    1200

ENTER CHECK NUMBER? 101
* CHECK ALREADY CANCELLED *

ENTER CHECK NUMBER? 102
          720      ELECTRICITY             $25.01     1400

ENTER CHECK NUMBER? END.
```

NOTE: The **CURRENT DATE** will be used automatically as the
CANCEL DATE.

Finishing Up

You don't need to use all the options each time you run TRANS.
Only request the options you need. When you finish, make sure
you save your data before you stop. Use option 9, insert a diskette or
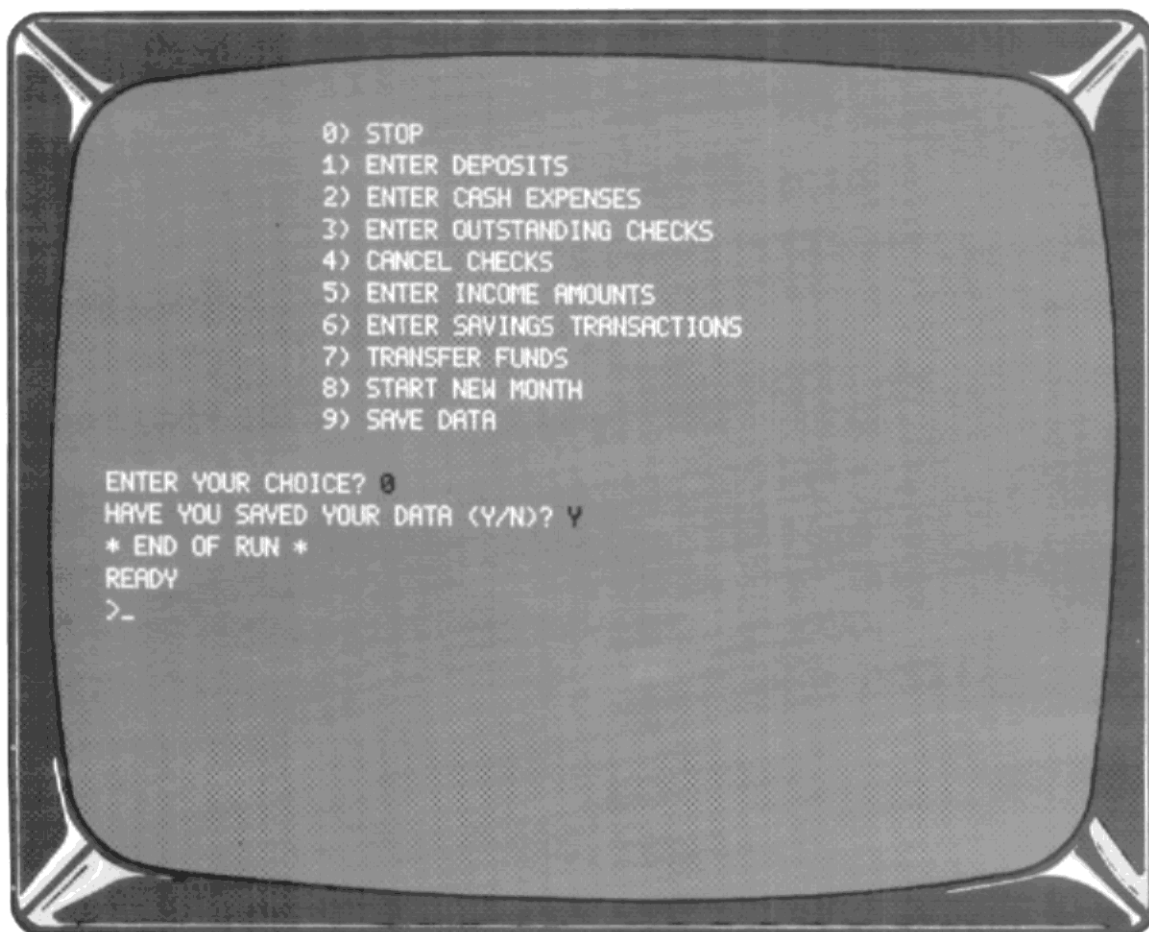blank cassette, and label the data according to the date of the
transactions.

```
                    DATA INPUT/OUTPUT

FILESPEC OF OUTPUT FILE: DEC78
WRITING ACCOUNTS
WRITING CHECKS
WRITING CASH EXPENSES
WRITING DEPOSITS
WRITING SAVINGS DATA
```

Tape users will see:

```
LOAD DATA TAPE(RECORD), THEN PRESS ENTER?_
```

Remember, don't use a period as part of your filename on diskette.
Then, use option ∅ to end the session.

```
                    0) STOP
                    1) ENTER DEPOSITS
                    2) ENTER CASH EXPENSES
                    3) ENTER OUTSTANDING CHECKS
                    4) CANCEL CHECKS
                    5) ENTER INCOME AMOUNTS
                    6) ENTER SAVINGS TRANSACTIONS
                    7) TRANSFER FUNDS
                    8) START NEW MONTH
                    9) SAVE DATA

ENTER YOUR CHOICE? 0
HAVE YOU SAVED YOUR DATA (Y/N)? Y
* END OF RUN *
READY
>_
```

What About Mistakes?

If you catch a mistake before you enter the transaction, you can either backspace to retype your correction or void the transaction by pressing **ENTER** before completing the information required for the transaction.

But if you have already completed the transaction and you do not discover the error until later, you can use the EDIT program to fix the mistake. EDIT allows you to examine and/or modify the data (accounts or transactions) created by INIT and TRANS. Use EDIT to check this data for errors and correct any that you might find.

You should also use the EDIT program each time you run TRANS simply to check the changes you made for accuracy. This way you may be able to catch an error before it causes any problems.

First, run the EDIT program according to the Loading Instructions.

<p style="text-align:center">BUDGET MANAGEMENT - EDIT 1.0</p>

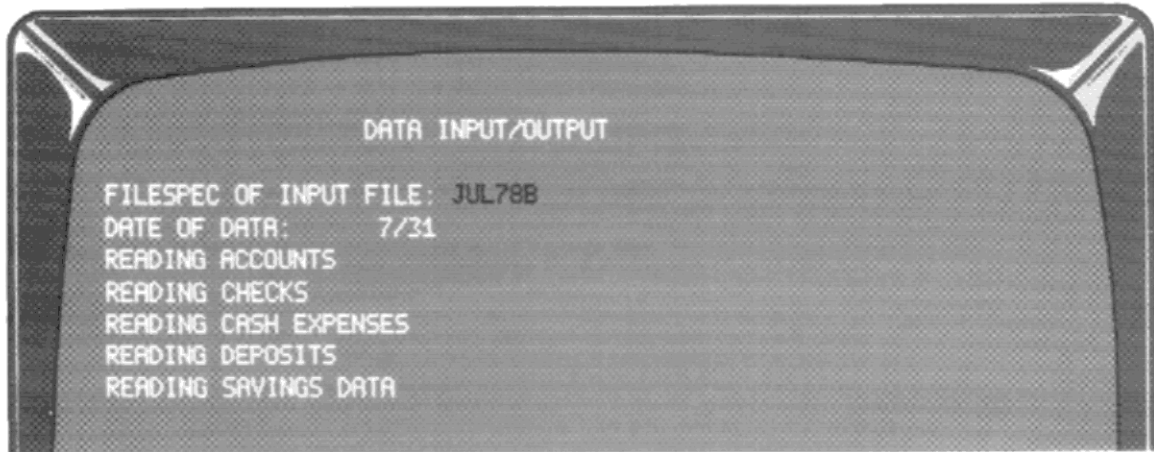<p style="text-align:center">ENTER TODAY'S DATE (MM/DD/YY)? 07/31/78_</p>

Enter the date as requested and the option list will be displayed.


```
        BUDGET MANAGEMENT - EDIT 1.0

           0) STOP
           1) EDIT ACCOUNTS
           2) EDIT OUTSTANDING CHECKS
           3) EDIT CANCELLED CHECKS
           4) EDIT CASH EXPENSES
           5) EDIT DEPOSITS
           6) EDIT SAVINGS DATA
           7) SAVE DATA


  ENTER YOUR CHOICE? _
```
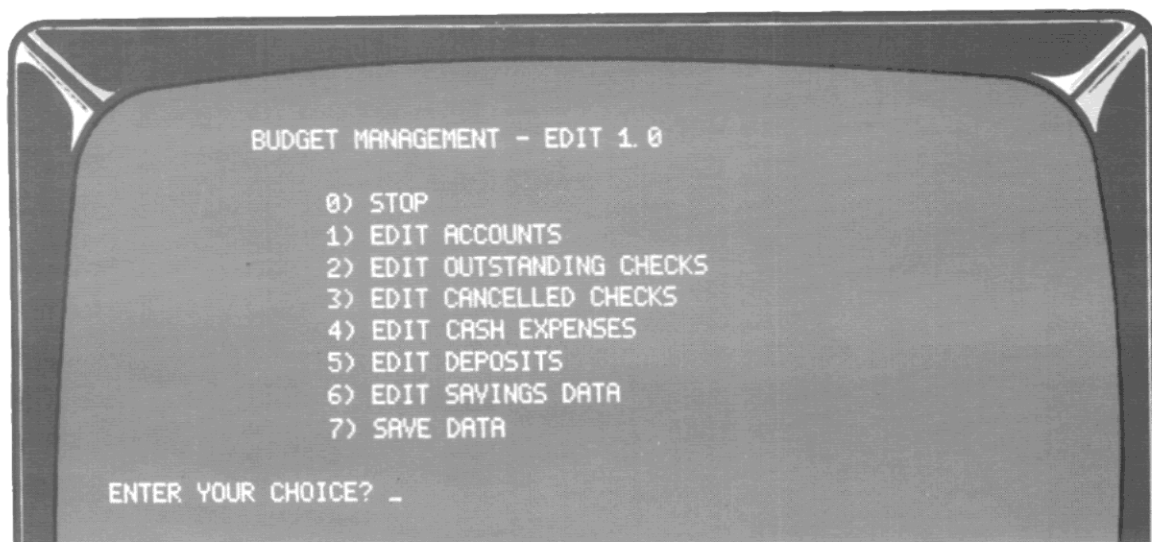
When you enter the number for the item you wish to check or change, you will be asked to load your accounts as before.

In DISK BASIC, you should **ENTER** the filespec for the data you
want to verify.

```
                    DATA INPUT/OUTPUT

    FILESPEC OF INPUT FILE: JUL78B
    DATE OF DATA:       7/31
    READING ACCOUNTS
    READING CHECKS
    READING CASH EXPENSES
    READING DEPOSITS
    READING SAVINGS DATA
```

If using tape, load the correct cassette and press **ENTER** .

```
        LOAD DATA TAPE(PLAY), THEN PRESS ENTER?_
```

After the data is loaded, the first item for the option you chose will
be automatically displayed. Press the down-arrow **↓** to display the
next item. If the current item is the last one, a down-arrow will
re-display it. Press the up-arrow key **↑** to display the previous item.
If the current item is the first one, an up-arrow will re-display it.
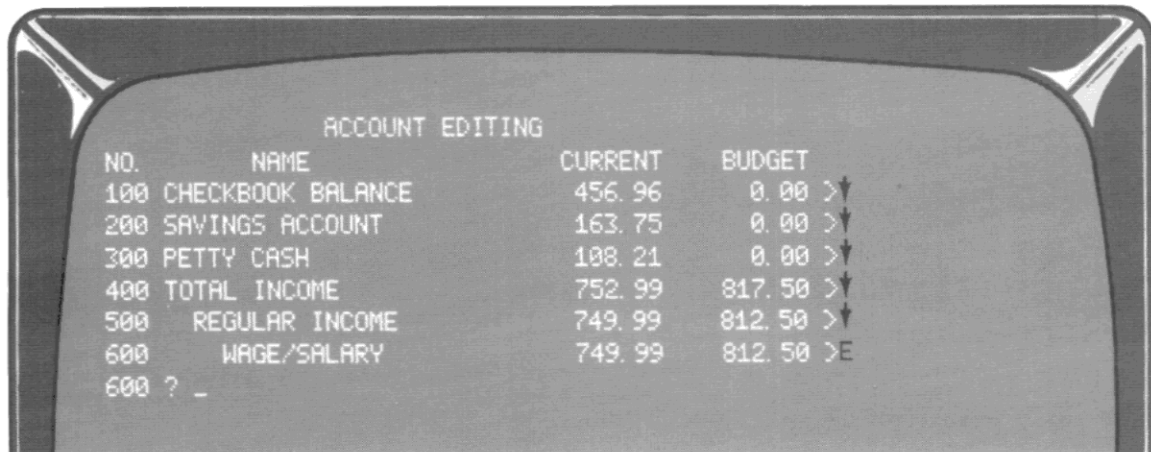
Type an **E** to change the item currently on display. This will cause a
question mark to appear under each part of that item allowing you
to type information to replace that item with. Press **ENTER** only to
leave it unchanged.
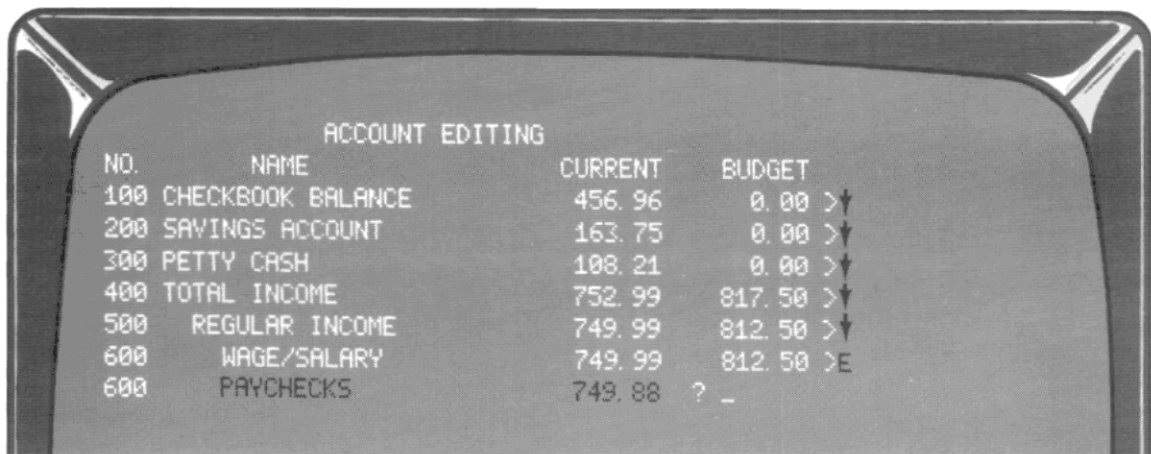
Type **X** to return to the option list.

If you want to enter data that is too large for that part of the item
(an account number or a check number that does not exist) the
* VALUE ERROR * message is displayed, and the current value will
be used instead.

To EDIT Accounts

Use option 1 to EDIT accounts.

```
              ACCOUNT EDITING
NO.     NAME              CURRENT    BUDGET
100 CHECKBOOK BALANCE      456.96      0.00 >↓
200 SAVINGS ACCOUNT        163.75      0.00 >↓
300 PETTY CASH             108.21      0.00 >↓
400 TOTAL INCOME           752.99    817.50 >↓
500    REGULAR INCOME      749.99    812.50 >↓
600       WAGE/SALARY      749.99    812.50 >E
600 ? _
```
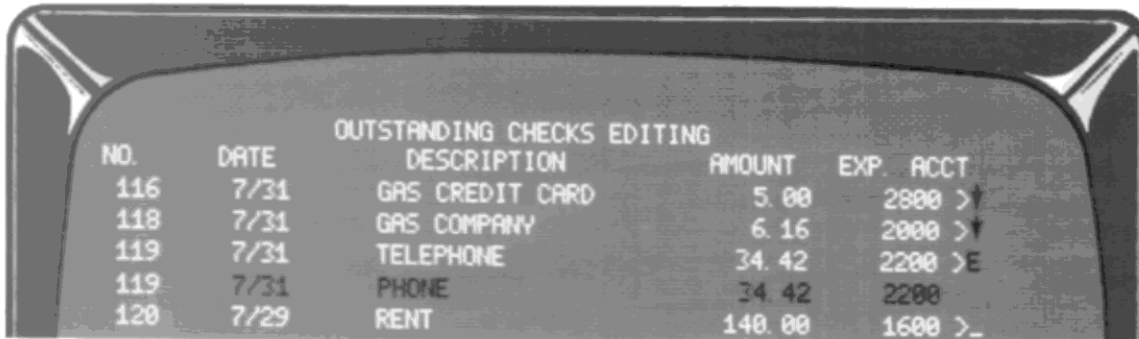
```
              ACCOUNT EDITING
NO.     NAME              CURRENT    BUDGET
100 CHECKBOOK BALANCE      456.96      0.00 >↓
200 SAVINGS ACCOUNT        163.75      0.00 >↓
300 PETTY CASH             108.21      0.00 >↓
400 TOTAL INCOME           752.99    817.50 >↓
500    REGULAR INCOME      749.99    812.50 >↓
600       WAGE/SALARY      749.99    812.50 >E
600       PAYCHECKS        749.88    ? _
```

Any changes in current or budget amounts of a sub-account will produce an automatic correction in all the main accounts affected by that sub-account.

To EDIT Outstanding Checks

Use option 2.

```
                    OUTSTANDING CHECKS EDITING
    NO.     DATE        DESCRIPTION         AMOUNT    EXP. ACCT
    116     7/31     GAS CREDIT CARD          5.00      2800 >↑
    118     7/31     GAS COMPANY              6.16      2000 >↑
    119     7/31     TELEPHONE               34.42      2200 >E
    119     7/31     PHONE                   34.42      2200
    120     7/29     RENT                   140.00      1600 >_
```
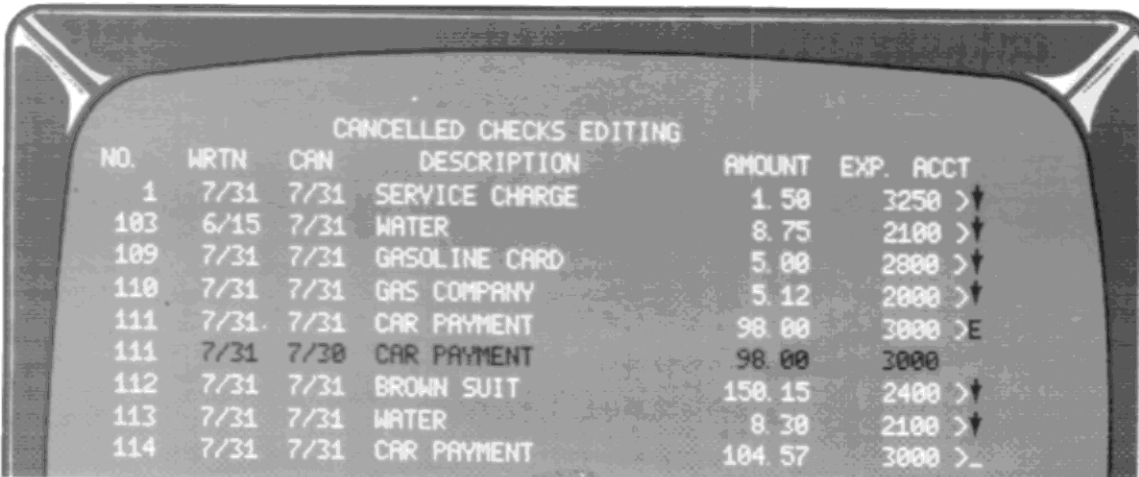
If a **CHECK NUMBER** is changed to any existing **CHECK NUMBER**, a * **CHECK EXISTS** * error is typed, and you will be asked to re-enter the check number. If you type the check's own number, a * **CHECK EXISTS** * message is also displayed. Press ENTER only to keep the same check number.

The **EXP. ACCT** must be a sub-account. It can't have any sub-accounts of its own. If the **EXP. ACCT** is changed to a main account or to an account that does not exist a * **BAD EXPENSE ACCOUNT** * message is displayed. You will then have to re-enter the account number.

If the **AMOUNT** or **EXP. ACCT** are changed to new values, the balances are corrected on that account and any other accounts that will be affected including main accounts.

To EDIT Cancelled Checks

Use option 3.

```
                      CANCELLED CHECKS EDITING
    NO.   WRTN   CAN     DESCRIPTION        AMOUNT   EXP. ACCT
      1   7/31  7/31   SERVICE CHARGE         1.50     3250 >↑
    103   6/15  7/31   WATER                  8.75     2100 >↑
    109   7/31  7/31   GASOLINE CARD          5.00     2800 >↑
    110   7/31  7/31   GAS COMPANY            5.12     2000 >↑
    111   7/31  7/31   CAR PAYMENT           98.00     3000 >E
    111   7/31  7/30   CAR PAYMENT           98.00     3000
    112   7/31  7/31   BROWN SUIT           150.15     2400 >↑
    113   7/31  7/31   WATER                  8.30     2100 >↑
    114   7/31  7/31   CAR PAYMENT          104.57     3000 >_
```
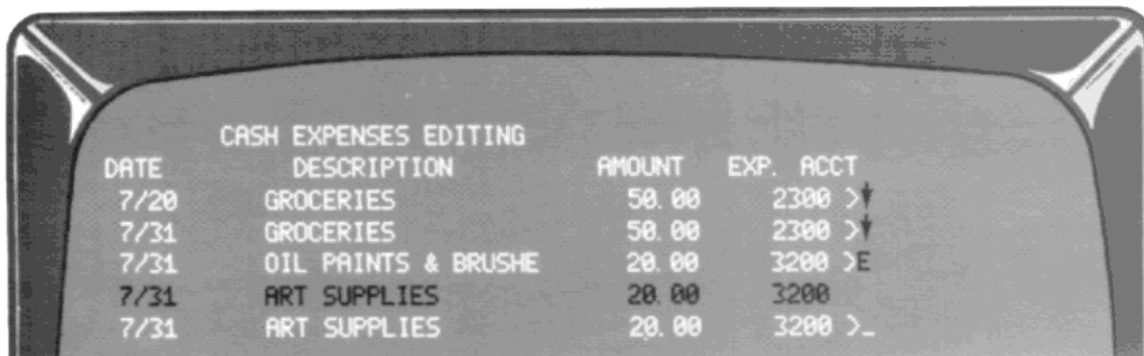
Beneath the **WRTN** column is the date the check was written.
Beneath **CAN** is the date the check was cancelled.

If a check number is changed to any existing check number, a
* **CHECK EXISTS** * message is displayed. You must re-enter a valid
check number. If you type the check's own number, a * **CHECK
EXISTS** * message is also displayed. Simply press **ENTER** to keep the
same check number.

If the **EXP. ACCT** is changed to a main account or to an account
that does not exist, a * **BAD EXPENSE ACCOUNT** * message occurs.
If the **AMOUNT** or the **EXP. ACCT** number is changed, all the
balances affected by the change will be corrected including main
accounts.

To EDIT Cash Expenses

Use option 4.
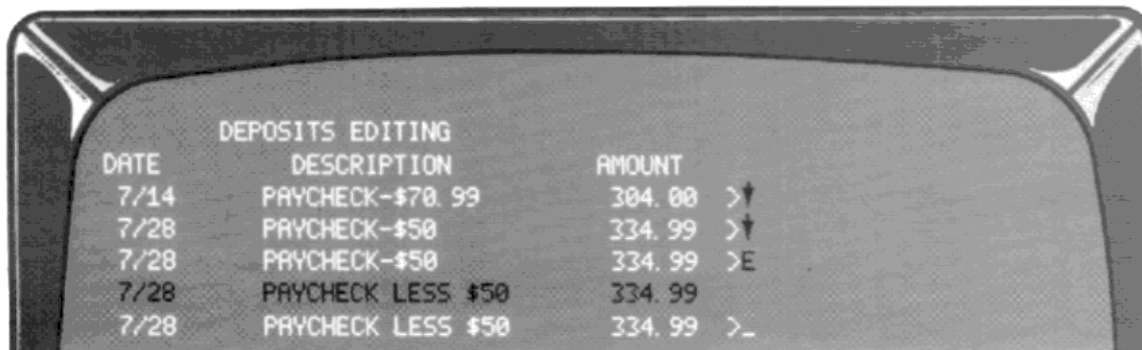
```
        CASH EXPENSES EDITING
DATE         DESCRIPTION          AMOUNT      EXP. ACCT
7/20      GROCERIES                50.00      2300  >
7/31      GROCERIES                50.00      2300  >
7/31      OIL PAINTS & BRUSHE      20.00      3200  >E
7/31      ART SUPPLIES             20.00      3200
7/31      ART SUPPLIES             20.00      3200  >_
```

If the **EXP. ACCT** is changed to a main account or to an account
that does not exist, a * **BAD EXPENSE ACCOUNT** * message occurs.
If the **AMOUNT** or **EXP. ACCT** number is changed, the balances
affected by the change will be corrected including main accounts.
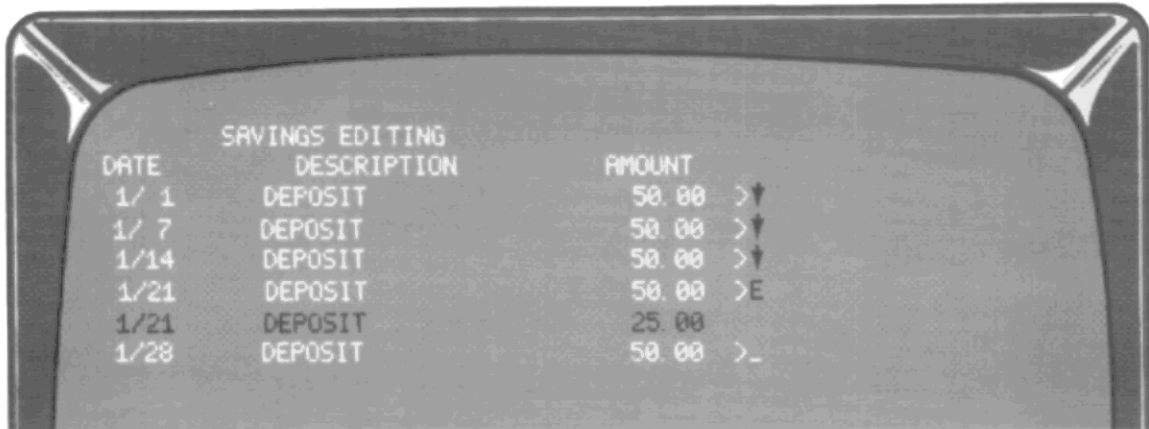
To EDIT Deposits

Use option 5.

```
         DEPOSITS EDITING
DATE          DESCRIPTION        AMOUNT
7/14      PAYCHECK-$70.99        304.00   >
7/28      PAYCHECK-$50           334.99   >
7/28      PAYCHECK-$50           334.99   >E
7/28      PAYCHECK LESS $50      334.99
7/28      PAYCHECK LESS $50      334.99   >_
```

If the **AMOUNT** is changed, the **CHECKBOOK BALANCE** is corrected to reflect the new value.

To EDIT Savings Account

Use option 6.

```
              SAVINGS EDITING
   DATE         DESCRIPTION        AMOUNT
   1/ 1         DEPOSIT            50.00    >▼
   1/ 7         DEPOSIT            50.00    >▼
   1/14         DEPOSIT            50.00    >▼
   1/21         DEPOSIT            50.00    >E
   1/21         DEPOSIT            25.00
   1/28         DEPOSIT            50.00    >_
```

If the **AMOUNT** of a savings transaction is changed, the **SAVINGS ACCOUNT** balance is corrected to reflect the new value. The format of the savings data is the same as for **DEPOSIT** data above. Deposits to the **SAVINGS ACCOUNT** are positive numbers; withdrawals are negative. You must precede negative numbers with a minus sign, –.

Once you have checked all your files using the options described above, you can exit from the program using option ∅.

NOTE: If you have made any changes, it will be necessary to save your data using option 9 before exiting from the program.

What Happens At the End of the Month?

The tapes and diskettes you use to save your accounts on cannot
hold an unlimited number of checks, savings transactions, expenses,
etc. Each time you run TRANS you add to the file you previously
had. Eventually, you must clear all these items and reset balances to
make room for more data.

By convention, this is done after the end of each month. On the last
day of the month, run TRANS and request any options you need to
enter your last transactions for the month. Then, save this data as
usual.

But the file you save this time reflects the entire previous month. So
name or label the file after the month and year. (For example,
JAN79, FEB79, etc.) This file will be saved for quite some time, so
you might want to make a backup copy of it.

Then, the first week of the next month, or the first time you run
TRANS during the next month, you load this permanent month-end
file into memory.

BEFORE you do any normal transactions, select option 8 to start a
new month. The following will be displayed to remind you to save
last month's data.


```
                    NEW MONTH

HAVE YOU SAVED THIS MONTH'S DATA? MAYBE
WAKE UP! PLEASE ANSWER YES(Y), OR NO(N)? Y

TYPE 1 TO START A NEW MONTH? 1
CLEARING.....
```
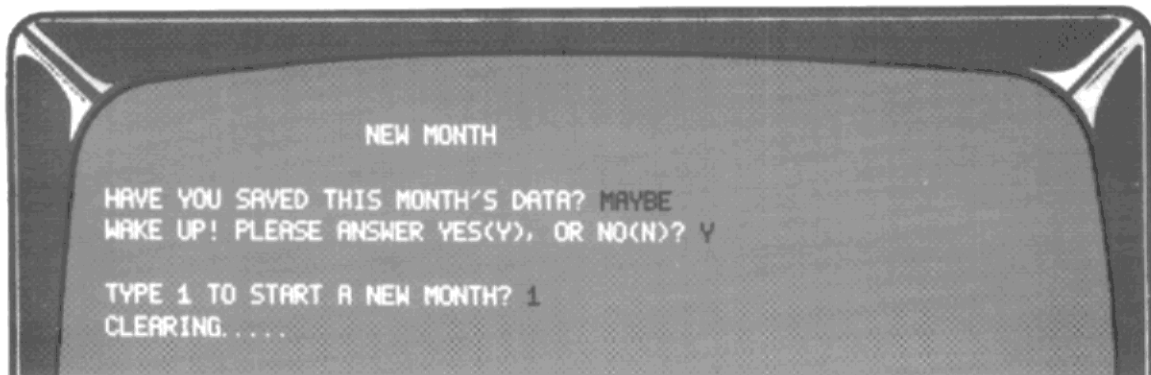
Press **Y** if you already have it saved. Otherwise, press **N**, and you will
have the chance to save it now.

Press **1** to the second question and items from last month will be
cleared from memory. (The only record you will have of these items
now is on the cassette or diskette for that month.) Enter anything
but 1, and you will be returned to the option list, and no clearing will
be done.

Starting a new month involves:
- Setting the **CURRENT** amount in all accounts to zero except for **CHECKBOOK BALANCE, SAVINGS ACCOUNT,** and **PETTY CASH.**
- All **CANCELLED CHECKS** are deleted, leaving only **OUTSTANDING CHECKS.**
- All **CASH EXPENSES, DEPOSITS,** and **SAVINGS** data are deleted.
- Budgeted amounts are also unchanged.

Once all this is done, you will be returned to the option list to enter your transactions as usual. Be sure to save your data when you get finished.

How Do I View the Results?

You can use the fourth and last program in the package, REPORT, to print reports to the Video Display or to a printer.

You can choose to look at account data or at individual transaction items – outstanding or cancelled checks, cash expenses, checking deposits or savings transactions.

In the category you choose to look at, you can specify a range of dates, account numbers, check numbers, descriptions or amounts. For example, you can look at outstanding checks written for an amount over $100.00.

Also, you can print cumulative reports for more than one month.

To Print Monthly Reports

Run the REPORT program.

```
        BUDGET MANAGEMENT - REPORT 1.0

    ENTER TODAY'S DATE (MM/DD/YY)? 07/31/78_
```

Enter the **CURRENT DATE** to display the first option list.
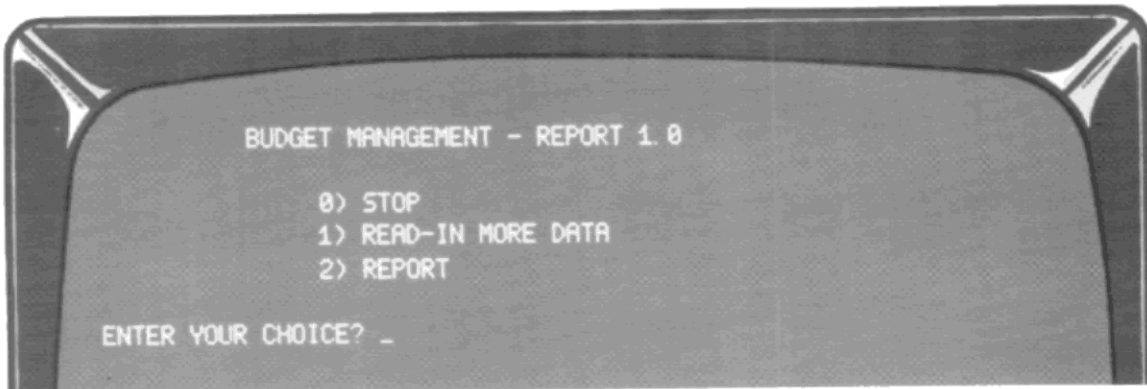
Type **2**. If there is no data in memory, you will be asked to load the file for which you want reports. (This can be any one data tape,

permanent or temporary, and the reports will reflect the data on that tape.)

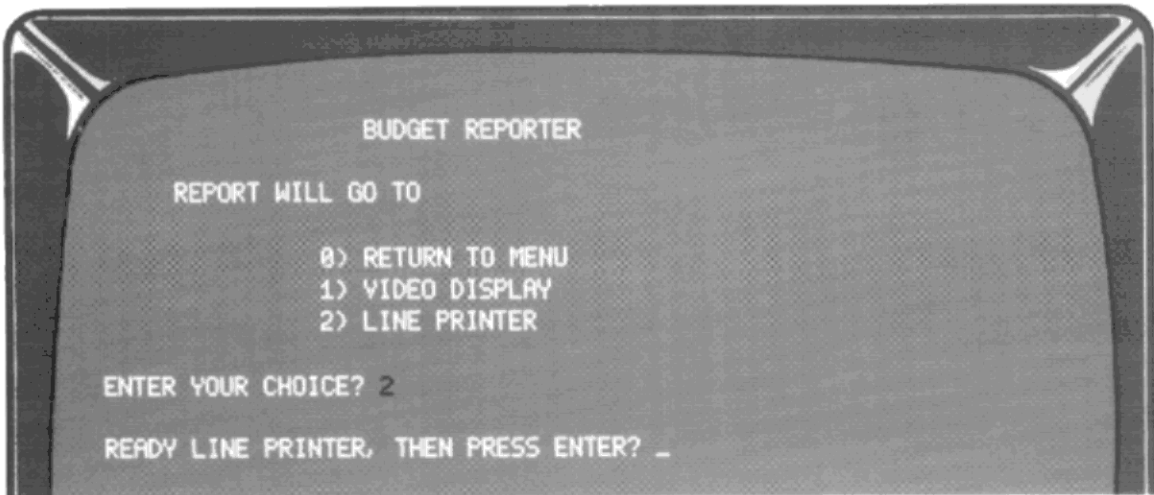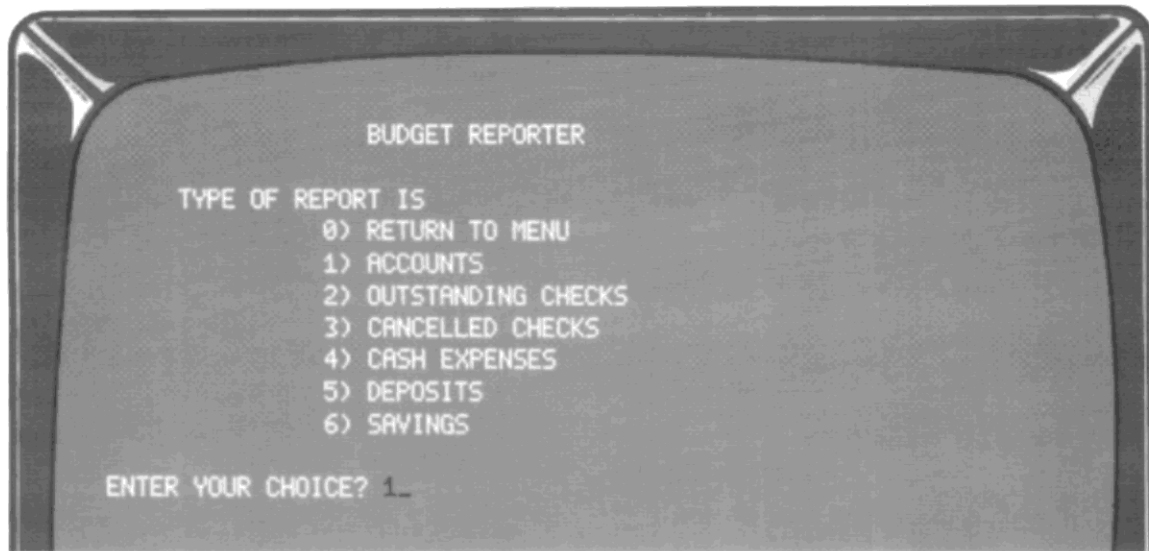In DISK BASIC, the filespec will be requested.

```
                   DATA INPUT

FILESPEC OF INPUT FILE: DKDK
        * FILE NOT FOUND *
FILESPEC OF INPUT FILE: JUL788
DATE OF DATA:        7/31
READING ACCOUNTS
READING CHECKS
READING CASH EXPENSES
READING DEPOSITS
READING SAVINGS DATA
```
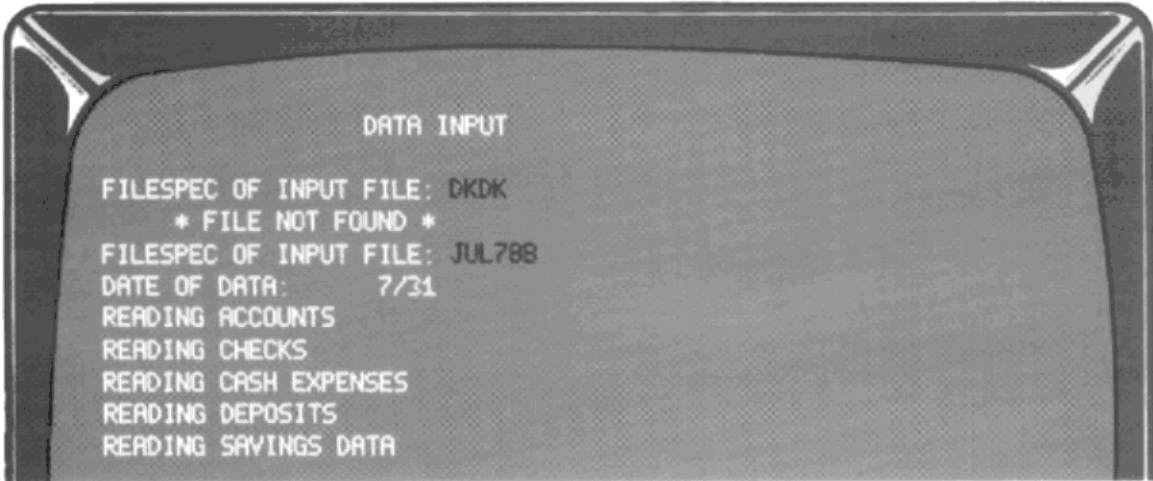
If using tape, the following prompt message is displayed instead:

```
LOAD DATA TAPE(PLAY), THEN PRESS ENTER?_
```

Use the cassette or diskette with the file you want reports for. When the file is loaded, the second option list will be displayed.

```
                 BUDGET REPORTER

REPORT WILL GO TO

              0) RETURN TO MENU
              1) VIDEO DISPLAY
              2) LINE PRINTER

ENTER YOUR CHOICE? 2

READY LINE PRINTER, THEN PRESS ENTER? _
```

Enter your choice of where your reports are to be listed. If you use option 2, you must press **ENTER** after you ready your printer. When this is done, the third option list is displayed.

```
                BUDGET REPORTER

    TYPE OF REPORT IS
              0) RETURN TO MENU
              1) ACCOUNTS
              2) OUTSTANDING CHECKS
              3) CANCELLED CHECKS
              4) CASH EXPENSES
              5) DEPOSITS
              6) SAVINGS

   ENTER YOUR CHOICE? 1_
```

Here, you can decide to look at accounts or look at specific
transaction items. Enter your choice and the final option list will be
displayed before the report is printed.

```
                BUDGET REPORTER

    SEARCHING FOR
              0) RETURN TO MENU
              1) CANCELLED DATE
              2) CHECK NUMBER
              3) EXPENSES ACCOUNT
              4) DATE ENTERED
              5) DESCRIPTION
              6) AMOUNT
              7) ALL

   ENTER YOUR CHOICE? 7_
```
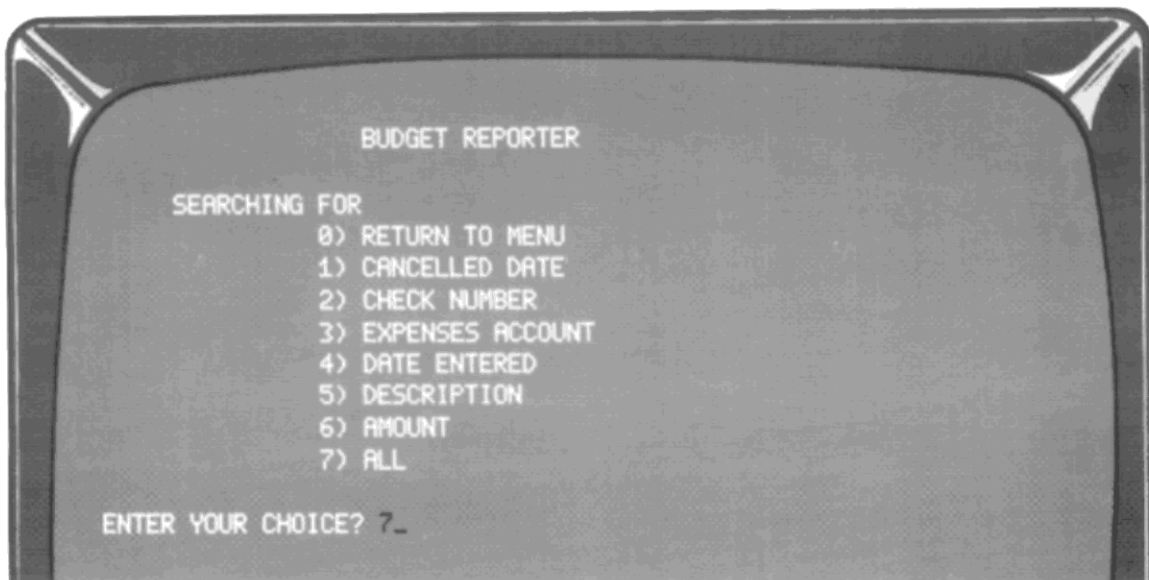
You can enter a choice here to help you search for a specific item
or several items. Your choice from this option list depends on the
choice you made on the previous list. Not all of these are available
for every account option.

	ACCOUNT	OUTSTANDING	CANCELLED	CASH	DEPOSITS	SAVINGS
CANCEL DATE			V			
CHECK NO.		V	V			
ACCOUNT NO.	V	V	V	V		
DATE ENTERED		V	V	V	V	V
DESCRIPTION	V	V	V	V	V	V
AMOUNT	V	V	V	V	V	V
ALL	V	V	V	V	V	V

For example, if you are looking at accounts, the **CANCEL DATE** does not apply as a searching option.

Option 5 will allow you to select any single descriptive phrase to search for. On the other options, if you only want to find one specific item, enter the same value for **HIGH** and **LOW**. If the **LOW** value is greater than the **HIGH** value a *** BAD RANGE *** error occurs.

```
                    BUDGET REPORTER

        SEARCHING FOR
                0) RETURN TO MENU
                1) CANCELLED DATE
                2) CHECK NUMBER
                3) EXPENSES ACCOUNT
                4) DATE ENTERED
                5) DESCRIPTION
                6) AMOUNT
                7) ALL

        ENTER YOUR CHOICE? 6

        <LOW AMOUNT>, <HIGH AMOUNT>        ? 75,300_
```

When you enter a range value from this option list, only the data that falls into that range for the category you have chosen will be printed.

If there is no data in the range you specified or in the category you chose, a * NO ENTRIES * message is displayed.

At any time while a report is being printed, you can end it by pressing the @ key. You must then press ENTER to return to the option list.

Following are sample reports. The PERCENT column tells you what percentage of the budget has been used up to this point. The REMAINING column shows the difference between the BUDGET value and the CURRENT value.

```
--------------------------------------------------------------------------------

                          BUDGET MANAGEMENT REPORT                    PAGE  1
                          ** DEPOSITS REPORT **
                             DATE:  7/31/78


         DATE          DESCRIPTION              AMOUNT
         ====          ===========              ======
         7/14          PAYCHECK-$70.99 ...........    304.00
         7/28          PAYCHECK-$50 ..............    334.99




--------------------------------------------------------------------------------

                          BUDGET MANAGEMENT REPORT                    PAGE  1
                          ** SAVINGS REPORT **
                             DATE:  7/31/78


         DATE          DESCRIPTION              AMOUNT
         ====          ===========              ======
     * NO ENTRIES *
```

REPORTS

```
                    BUDGET MANAGEMENT REPORT                    PAGE  1
                    ** OUTSTANDING CHECKS REPORT **
                         DATE:   7/31/78


NUMBER       DATE        DESCRIPTION             AMOUNT      EXPENSE
======       ====        ===========             ======      =======
   116       7/31    GASOLINE CHARGE CARD .......   5. 00       2800
   118       7/31    GAS COMPANY ................   6. 16       2000
   119       7/31    TELEPHONE ..................  34. 42       2200
   120       7/29    RENT .......................  140. 00      1600
```

```
                    BUDGET MANAGEMENT REPORT                    PAGE  1
                    ** CANCELLED CHECKS REPORT **
                         DATE:   7/31/78


NUMBER       DATE        DESCRIPTION             AMOUNT      EXPENSE    CANCELLED
======       ====        ===========             ======      =======    =========
     1       7/31    SERVICE CHARGE .............    1. 50      3250        7/31
   103       6/15    WATER ......................    8. 75      2100        7/31
   109       7/31    GASOLINE CARD ..............    5. 00      2800        7/31
   110       7/31    GAS COMPANY ................    5. 12      2000        7/31
   111       7/31    CAR PAYMENT ................   98. 00      3000        7/31
   112       7/31    BROWN SUIT .................  150. 15      2400        7/31
   113       7/31    WATER ......................    8. 30      2100        7/31
   114       7/31    CAR PAYMENT ................  104. 57      3000        7/31
   115       7/31    ELECTRICITY ................   52. 11      1900        7/31
   117       7/31    CASH .......................   40. 00      2350        7/31
```

```
                    BUDGET MANAGEMENT REPORT                    PAGE  1
                    ** CASH EXPENSES REPORT **
                         DATE:   7/31/78


             DATE        DESCRIPTION             AMOUNT      EXPENSE
             ====        ===========             ======      =======
             7/20    GROCERIES ..................   50. 00      2300
             7/31    GROCERIES ..................   50. 00      2300
             7/31    OIL PAINTS & BRUSHES .......   20. 00      3200
```

```
              BUDGET MANAGEMENT REPORT                    PAGE  1
              ** ACCOUNTS REPORT **
                 DATE:   7/31/78
```

ACCOUNT	NAME	CURRENT	BUDGET	PERCENT	REMAINING
100	CHECKBOOK BALANCE	456.96	0.00	0.00	0.00
200	SAVINGS ACCOUNT	163.75	0.00	0.00	0.00
300	PETTY CASH	108.21	0.00	0.00	0.00
400	TOTAL INCOME	752.99	817.50	92.11	64.51
500	REGULAR INCOME	749.99	812.50	92.31	62.51
600	WAGE/SALARY	749.99	812.50	92.31	62.51
700	VARIABLE INCOME	3.00	5.00	60.00	2.00
800	BONUS	0.00	0.00	0.00	0.00
900	INTEREST	3.00	5.00	60.00	2.00
1000	SAVINGS	3.00	5.00	60.00	2.00
1100	SET-ASIDE INCOME	0.00	0.00	0.00	0.00
1200	FUTURE GOALS	0.00	0.00	0.00	0.00
1300	EMERGENCIES	0.00	0.00	0.00	0.00
1400	TOTAL EXPENSES	779.08	695.07	112.09	84.01-
1500	REGULAR EXPENSES	779.08	695.07	112.09	84.01-
1600	RENT/MORTGAGE	140.00	140.00	100.00	0.00
1700	HOUSE MAINTENANCE	0.00	5.00	0.00	5.00
1800	UTILITIES	80.44	49.00	164.16	31.44-
1900	ELECTRICITY	52.11	25.00	208.44	27.11-
2000	NATURAL GAS	11.28	15.00	75.20	3.72
2100	WATER	17.05	9.00	189.44	8.05-
2200	TELEPHONE	34.42	25.00	137.68	9.42-
2300	FOOD & BEVERAGE	100.00	125.00	80.00	25.00
2350	MEALS OUT	40.00	50.00	80.00	10.00
2400	CLOTHING	150.15	5.00	3003.00	145.15-
2500	TRANSPORTATION..........	212.57	139.57	152.30	73.00-
2600	BUS	0.00	15.00	0.00	15.00
2700	CAR	212.57	124.57	170.64	88.00-
2800	GAS	10.00	15.00	66.67	5.00
2900	CAR MAINTENANCE	0.00	5.00	0.00	5.00
3000	CAR PAYMENTS	202.57	104.57	193.72	98.00-
3100	MEDICAL	0.00	5.00	0.00	5.00
3200	MISCELLANEOUS	20.00	150.00	13.33	130.00
3250	SERVICE CHARGE	1.50	1.50	100.00	0.00
3300	SEASONAL EXPENSES	0.00	0.00	0.00	0.00
3400	EDUCATION	0.00	0.00	0.00	0.00
3500	TRAVEL	0.00	0.00	0.00	0.00

REPORTS

You can cancel reports by pressing the @ key. Then answer the question by pressing the **ENTER** key.

```
BUDGET MANAGEMENT: CANCELLED CHECKS     PAGE  1  DATE  7/31/78
   NO.   WRTN   CAN     DESCRIPTION        AMOUNT  EXP. ACCT
     1   7/31  7/31  SERVICE CHARGE .....    1. 50    3250
   103   6/15  7/31  WATER .............     8. 75    2100
   109   7/31  7/31  GASOLINE CARD .....     5. 00    2800
   110   7/31  7/31  GAS COMPANY .......     5. 12    2000
   111   7/31  7/31  CAR PAYMENT .......    98. 00    3000

     * ABORTED *
```

Printing Cumulative Reports

You can also use the REPORT program to print reports for more than one month, even though each month is on a separate tape or diskette file.

When you first run the program, use option 1 on the first option list. After you read in the first tape or diskette file, you will be returned to the option list.

Continue to use option 1 until you have read in the last file you want to use. Then, use option 2.

The rest of the instructions are the same as for the single reports.

NOTE: After the first cassette or diskette has been read, only accounts that match those on it will be read. If the account is not on the first file, it will be ignored on later cassette or diskette files. The **CURRENT** and **BUDGET** values are added.

Thus, if you have added accounts at some time after you first created them, the latest file with the most accounts on it should be read in first.

This is why you can't run cumulative reports if you have renumbered your accounts since you began. All of your old account numbers will not match the new ones, and one set will be ignored.

Tips On Reading the Reports

Pay close attention to the **REMAINING** column. You can use it to guide changes in your spending habits. If you have a lot left over in one category that you budgeted but did not spend, this tells you that the **BUDGET** amount is not realistic. If you have a negative amount, you spent more than you budgeted.

You may change the **BUDGET** amount using the EDIT program. You can change your spending habits using your will power.

If you have trouble seeing exactly where your money is going, you may want to create more sub-accounts or insert new accounts using the INIT program.

You can judge all these things better after you've used the program for a few months. So experiment and enjoy yourself using these programs; they are at your service. Try playing with some test data for a few days to get a "feel" for the package.

Happy Budgeting!

APPENDIX

ACCOUNT NUMBER	LEVEL	ACCOUNT NAME	CURRENT	BUDGET

(Worksheet)

ACCOUNT NUMBER	LEVEL	ACCOUNT NAME	CURRENT	BUDGET
ACCOUNT NUMBER	LEVEL	ACCOUNT NAME	CURRENT	BUDGET

(Worksheet)

ACCOUNT NUMBER	LEVEL	ACCOUNT NAME	CURRENT	BUDGET

Generating Your Own Account List

If you wish to generate your own account list, you must create **DATA** statements to replace those found in the INIT program. You need to have a little programming experience to do this because you will have to modify the program.

It would be a good idea to save a copy of the original version even after your changes are complete.

First **CLOAD** the INIT program (the only one you have to change). Then, use the **DELETE** command in BASIC to delete lines 10000-10090 as follows.

```
DELETE 10000-10090
```

This deletes the default account list. Now, you must replace it with your own accounts from the Worksheet you filled out. You need to use the **ACCOUNT NAME** and **LEVEL** for now.

The first account MUST be **CHECKBOOK BALANCE** with a Level of zero.

The second account MUST be **SAVINGS ACCOUNT** with a Level of zero.

The third account MUST be **PETTY CASH** with a Level of zero.

The fourth account MUST be **TOTAL INCOME** with a Level of zero. This account must have at least one sub-account beneath it.

After your income accounts you MUST have the **TOTAL EXPENSES** account with a Level of zero. This account must also have at least one sub-account beneath it.

You may then add as many zero level accounts as you wish. Each zero level account starts an independent block of accounts.

The following example sets up a couple's income and expenses separately.

Worksheet

ACCOUNT NUMBER	LEVEL	ACCOUNT NAME	CURRENT	BUDGET
	0	CHECKBOOK BALANCE		
	0	SAVINGS ACCOUNT		
	0	PETTY CASH		
	0	TOTAL INCOME		
	1	HUSBAND'S PAY		
	1	INTEREST INCOME		
	0	WIFE'S INCOME		
	1	WIFE'S PAY		
	1	INTEREST INCOME		
	0	TOTAL EXPENSES		
	1	HOUSE PAYMENTS		
	1	UTILITIES		
	0	WIFE'S EXPENSES		
	1	CAR PAYMENTS		
	1	TELEPHONE		
	0	JOINT EXPENSES		
	1	COOKIES		
	1	FOOD BEVERAGE		

Start entering your accounts as **DATA** statements at line 1ØØØØ.
Each line should be numbered in increments of 1Ø. Also, each line
should begin with the word **DATA** followed by the **ACCOUNT
NAME**, a comma, the account's Level, a comma, the next account's
name, a comma, that account's Level, and so on.

The **DATA** statements would look like this for the example above:

1ØØØØ DATA CHECKBOOK BALANCE, Ø, SAVINGS ACCOUNT, Ø, PETTY CASH, Ø

1ØØ1Ø DATA TOTAL INCOME, Ø, HUSBAND'S PAY, 1, INTEREST INCOME, 1

1ØØ2Ø DATA WIFE'S INCOME, Ø, WIFE'S PAY, 1, INTEREST INCOME, 1

1ØØ3Ø DATA TOTAL EXPENSES, Ø, HOUSE PAYMENTS, 1; UTILITIES, 1

1ØØ4Ø DATA WIFE'S EXPENSES, Ø, CAR PAYMENTS, 1, TELEPHONE, 1

1ØØ5Ø DATA JOINT EXPENSES, Ø, COOKIES, 1

1ØØ6Ø DATA FOOD & BEVERAGE, 1, "   ", -1

BEWARE! Don't use commas or colons as part of **ACCOUNT
NAMES**.

After the last account is a single space enclosed in quotes, with a
level of minus one. This must ALWAYS be the last two pieces of
DATA.

Save this new INIT program on cassette or diskette when you are
done so you can run it.

The new version of INIT will use your accounts instead of the ones
originally programmed. You can press **Y** to use each account.
Then, you will be asked a **CURRENT** and **BUDGET** amount for each
of your accounts just as in the original program.

If you receive a * **BAD LEVEL** * or a * **FATAL ERROR ABORTED** *
message, it means the program finds your indentation levels
inconsistent. Go back through your **DATA** statements to see if you
can find the error and correct it.

Finally, use option 4 of the INIT program as usual to save your
account structure.

You can renumber it, or add to it at any time.

Error Messages

UNEXPECTED ERROR #nn IN LINE xxxx-RUN ABORTED
Error nn occurred while opening, closing, reading, or writing to disk or tape.

If this error occurs because you used an invalid TRSDOS filespec when you tried to load or save your data files, you can type
RESUME 22Ø `ENTER` to try again.

FILE NOT FOUND
Specified input file does not exist.

INPUT DATA EXCEEDS MEMORY ALLOCATION
Too much data in the data file. Start a new file.

BAD LEVEL
Level is inconsistent with previous level or is greater than five.

FATAL ERROR
The program was aborted due to a serious error.

BAD ACCOUNT NUMBER SEQUENCE
Invalid renumbering request.

NO ROOM TO INSERT
All memory allocated to accounts has been used and no room exists for new account insertion. Start a new file.

BAD ACCOUNT NUMBER
The new account number for insertion exists or is too large or small.

NO CHECKS
No outstanding checks exist so no cancelling can be done.

CHECK EXISTS
Attempt to enter a check with the same check number as a previously entered check.

BAD EXPENSE ACCOUNT
The specified account was a main-account or does not exist.

CHECK NOT FOUND
No check with specified check number exists.

CHECK ALREADY CANCELLED
Attempt to re-cancel a previously cancelled check.

CASH EXPENSES FULL
All allocated memory for cash expenses has been used and no new entries may be made. Start a new file.

DEPOSITS FULL
All allocated memory for deposits has been used and no new entries may be made. Start a new file.

SAVINGS DATA FULL
All allocated memory for savings transactions has been used and no new entries may be made. Start a new file.

CHECK FULL
All allocated memory for checks has been used and no new entries may be made. Start a new file.

NO DATA
The selected data category has no entries, and therefore no editing can be performed.

BAD VALUE
The entered check number, date, or account number was too large (greater than 32767).

ABORTED
The at-symbol (@) was depressed during a print-out to cancel the report being generated.

BAD REQUEST
The searching request was invalid for the previously selected data category.

NO ENTRIES
No data exists in the specified data category or no data was found in the designated range during a search.

If any **FULL** error messages occur, you have to use option 8 in the TRANS program to **START A NEW MONTH**, even if it is not yet the end of the month. You can end your new file on schedule at month-end. Then, you will have two permanent files for that month, and you will need to use both of them as input to REPORT.

Note: When a month is split into two parts, you must EDIT the "budget" amounts and change them all to half their value. (If this is not done, the budget amounts are added together at report time. This would double your "budget" amounts.)

Or you can continue with the new file past the month-end until it gets full also. You will start a new file whenever this happens from now on. If you do this, you will no longer be on a monthly schedule. This might turn out to be inconvenient, since many of your budgeted items occur on a monthly basis.

Variable Usage

M1	Maximum number of accounts allowed
M2	Maximum number of checks
M3	Maximum number of cash expenses
M4	Maximum number of deposits
M5	Maximum number of savings transactions
K1	Current number of accounts in memory
K2	Current number of checks in memory
K3	Current number of cash expenses in memory
K4	Current number of deposits in memory
K5	Current number of savings transactions in memory
A1%	Account number (negative if sub-account)
A2$	Account name (18 characters)
A3#	Current account amount
A4#	Budget (predicted) account amount
A6%	Reference/level value (See below.)
C1%	Check number
C2%	Date written
C3$	Description (18 characters)
C4	Amount of check
C5%	Expense account index (See below.)
C6%	Date cancelled (zero if not cancelled)
E1%	Date of cash expense
E2$	Description (18 characters)
E3	Amount of cash expense
E4%	Expense account index (See below.)
D1%	Date of deposit
D2$	Description (18 characters)
D3	Amount of deposit
S1%	Date of savings transaction
S2$	Description (18 characters)
S3	Amount (positive for deposit; negative for withdrawal)
DT	Today's date
F	Data file flag: F=∅ if not data file in memory
	F=1 if data file is not in memory
X	String for data delimitor-set to a text comma (",")
AD$	Advance cursor right
EL$	Erase to end of line
CU$	Move cursor up
BL$	Move to beginning of line
CD$	Move cursor down
J	Current menu selection
D	Date of data file
DK	Disk flag: DK=∅ if LEVEL II BASIC Computer
	DK=1 if DISK BASIC Computer

Reference/Level Value

Value = Reference Index * 10 + Level

The Level here is the same as that on the Worksheet. The Reference points to the Index on the main-account or is equal to zero if there is no main-account.

Expense Account Index

Instead of saving the actual expense account, a pointer is stored as an Index to the desired Expense Account.

Memory Usage

The information below may be used by an experienced programmer to take advantage of larger RAM memory than 16K. The Budget Management Package is written for:

> 61 Accounts (The 61st Account is always an END-OF-ACCOUNT marker.)
> 50 Checks
> 20 Deposits
> 25 Cash Expenses
> 20 Savings Transactions

The following calculations must be performed to assure an OUT OF MEMORY error does not occur.

ITEM		BYTES USED
Program text		8324
Program string space		432
Program stack space and variables (overhead)		860
Account	(41 each * 61) =	2501
Checks	(33 each * 50) =	1650
Cash expenses	(29 each * 25) =	725
Deposits	(27 each * 20) =	540
Savings	(27 each * 20) =	+ 540
	Total =	15572

M1 = one plus number of accounts desired
M2 = number of checks desired
M3 = number of cash expenses desired
M4 = number of deposits desired
M5 = number of savings transactions desired

$$432 + 18 * (81 + 100 + 25 + 20 + 20)$$

String Space = $432 + 18 * (M1+M2+M3+M4+M5)$ $\neq = 4860$

The result replaces 3600 in line 100 of each program as the amount of string space.

Memory Available $> 9616 + M1*41 + M2*33 + M3*29 + M4*27 + M5*27$

If the memory you have in your system is less than the above, an OUT OF MEMORY error will occur when you try to run the program.

You should change line 110 in each program to reflect the correct values of variables M1 through M5.